1969

Management in agricultural marketing cooperatives

Medhat Mahmoud Sabri
Iowa State University

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MANAGEMENT IN AGRICULTURAL MARKETING COOPERATIVES

by

Medhat Mahmoud Sabri

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of The Requirements for the Degree of DOCTOR OF PHILOSOPHY

Major Subject: Sociology (Rural)

Approved:

Signature was redacted for privacy.

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Dean of Graduate College

Iowa State University
Of Science and Technology
Ames, Iowa
1969
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DEDICATION

To my parents and my professors.
INTRODUCTION

The Problem Setting

There are rapid changes taking place in agriculture in the United States. There are changes toward advanced technology, toward larger farms, toward increased over-all productivity and productivity per man, and toward increased rural specialization. This implies changes in all types of institutions; i.e., family, school, business, church, and government. The sector of the rural society which will be focused upon in this thesis is the business sector. Agribusiness—the total farm business complex—has become a major U.S. industry with many of the problems which accompany a large complex, changing and growing industry.

The basic rural population upon which much attention and research has been focused is the farmers themselves. However, as in any industry, it is not merely the farm production process which must be efficient, but the supplying of raw materials, the wholesaling of the products, and finally the retail selling must also be efficient in this process. This research focuses on a vital link in this complex, the managers of farmer cooperatives, cooperative farm supply dealers.

The selection and training of effective managers is a crucial problem. Both the selection and training process assumes there is adequate knowledge or criteria upon which to base selection and training decisions. It assumes there is sufficient knowledge about what makes an effective manager. Yet there is little verified knowledge about the causal (or even relational) linkages between personal attributes, knowledge,
attitudes and skills needed and successful management and financial outcomes of cooperatives.

It is assumed that more effective managers will not only improve the functioning of cooperatives but would also directly benefit the farmers. With more efficient suppliers, the farmer should be able to attain more optimum use level of farm inputs and should benefit from lower costs of inputs and greater returns on his products. This should be especially true of cooperatives whose saving in theory are passed directly on to patron members.

It is the general purpose of this study to determine variables associated with management behavior and success, specifically in farmer cooperatives.

Thesis Objectives

This thesis is concerned with human behavior in general and management behavior in particular. It is focused, as previously stated, on variables which might be associated with management behavior and in turn with economic performance of farmer cooperatives.

Management has been perceived by many scientists and experienced managers as the science and art of combining ideas, facilities, processes, materials and people to produce and market a product or render service profitably. Thus an essential of good management is the ability of the manager to manage himself—organize his own work and thoughts, decide on a course of action, execute decisions and impartially analyze the results therefrom. Unless he manages himself effectively, no amount of ability,
skill, experience or knowledge will make him an effective executive.

Good management is considerably more than being technically competent. Many technically competent people make inferior administrators. Many persons who are less technically competent are productive administrators. Managers who are both technically and administratively competent are usually superior managers. This superior management is often the scarcest resource and very often the most limiting resource in a business. Land, equipment, capital and labor are usually not so scarce as good management. A superior manager may make a success of an otherwise poor business potential, while a poor manager may fail even with a great business potential.

On the whole, cooperatives may require superior managerial ability because of their organizational structure and the dual position of their customers, that of patrons and stock-holders.

In farmer cooperatives the board of directors, manager and his employee team are charged with the responsibility of planning, organizing, directing, coordinating and controlling the cooperative. These steps are often referred to as the functions of management. This study is concerned only with variables which might be associated with the manager's performance in each of the functions of management and which in turn should be related to the economic performance of the farmer cooperative.

The general objectives of this dissertation can be summarized as follows:

(1) To develop and test an analytical model of human behavior.
(2) To determine some of the individual's personal variables which are related to human behavior.

(3) To determine some of the situational variables which are related to human behavior.

(4) To develop a predictive model of human behavior.

Consistent with the above stated general objectives of this dissertation the specific objectives are as follows:

(1) To develop predictive models of typology of management behavior including personal variables and situational variables.

(2) To determine the relationships between selected personal variables and management behavior.

(3) To determine the relationships between selected situational variables and management behavior.

(4) To determine the relationships between types of management behavior and the economic outputs of farmer cooperative associations.

Thesis Outline

The objectives stated above guide the remainder of this thesis. The following chapter contains the developed analytical model which is the overall framework of the thesis. An attempt was made to generate a logically as well as theoretically interrelated set of concepts in this analytical model. The elements and/or the concepts of the model are individual behavior or action, individual personal variables, the situational conditions relevant to the individual actor, outputs of the
individual behavior practices, and consequences of the output of the individual behavior practices. The theoretical basis for this model were discussed along with the presentation and discussion of the concepts and/or the elements of the present study of management behavior or performance in farmer cooperative associations. The first step focused on defining and discussing the environment in which the manager makes and implements his decisions. The second step dealt with human behavior in general, the role of the manager in farmer cooperative, and types of management behavior in particular. The third step focused on presenting and discussing some selected individual personal variables and situational variables which were assumed to be related to types of management behavior. The third step followed with theoretical discussion of the output of the individual behavior practices and its consequences.

General hypotheses, sub-general hypotheses, and specific hypotheses are presented next. Ten general hypotheses presenting the analytical model were derived from the theoretical orientations. Derivation of hypotheses chapter also includes detailed definitions of the concepts used in the hypotheses and rational for each hypothesized relationship.

Then the methods and procedures used in testing the hypotheses are discussed. The field study which provided the data for this dissertation is discussed. The operational measures of the concepts contained in the specific hypotheses are presented. The statistical methods used are zero order correlation, multipole linear regression, and F test.

The findings are presented next. The general hypotheses are stated, with the empirical hypotheses used to test each of the general hypotheses. Also, statement of the null hypothesis and the results of the statistical
tests of significance are presented with each empirical hypothesis.

The findings chapter is followed by discussion and suggestions for future research chapter. In this chapter the findings pertaining to the hypothesized relationships between management behavior types and each specific concept have been discussed. Discussion of multiple relationships is also presented. Based on this study and its findings suggestions for future research are offered.

The final chapter of the dissertation contains a summary.

The summary is followed by the bibliography, the acknowledgments and appendicies.
THEORETICAL ORIENTATIONS

The primary purpose of this section is to discuss the process of management in some detail and to relate this process to a broader theoretical and conceptual framework of social behavior. From this broader framework hypotheses concerning the expected relationships between selected personal variables and situational variables and management process will be derived. Also hypotheses about the relationships between types of management behavior and economic variables will be developed. The disciplines from which the concepts, theory and research generalizations will be drawn are sociology, social psychology, psychology, business administration, education and economics. Implicit in this approach is that no one discipline provides all of the concepts and generalizations to account for the complex behavior involved in business management.

The Analytical Model

The analytical frame of reference, or model, utilized in this study of managers of farmer cooperatives and the factors associated with managerial performance is presented in this section. There appears to be no existing theoretical framework or model which covers all the variables which are of concern in this study. Therefore an attempt will be made to develop an analytical model to encompass the variables which are of central concern. The analytical model is intended to be abstract and general in its orientation in order to give it the merit of elasticity and wide scope of generality and/or applicability. An attempt is made to generate a logically as well as theoretically interrelated set of concepts in this analytical model.
The elements and/or the concepts of the model are as follows:

1) Individual behavior or action.
2) Individual personal variables.
3) The situational conditions relevant to the individual actor.
4) Outputs of the individual behavior practices.
5) Consequences of the output of the individual behavior practices.

Schematically the relationships of the analytical model are as follows:

Figure 1. The analytical model
Assumptions about the model

The assumptions that underline the model are as follows:

(A) General assumptions:

1. Man is an organizing being.
2. Man has the ability to deal with abstractions.
3. Individual behavior is goal-oriented.
4. Individual behavior is normatively regulated.
5. Individual characteristics (ascribed and/or achieved) influence his behavior and sometimes determine his course of action.
6. The individual is assumed to be a product of his experience world and the situational conditions direct his course of action.
7. The model assumes that individual behavior will have direct and/or indirect affect on the other individuals in the collectivity or the system and on the system itself.
8. The model also assumes that the output of the individual behavior will produce reactions and/or consequences in the collectivity and/or the system.

(B) Specific assumptions:

1. Generality (apply to any situation where human behavior and its outcome are the subject of study).
2. Applicability (the model could be applied empirically).
3. Predictivity (the model has a predictive power and may be used for prediction of human behavior and/or the
outcome and/or the consequences of human behavior).

4. The model assumes possible control over some of its components (such as situational variables).

5. The variables in the model are assumed to be measurable with a high degree of accuracy.

6. All other variables, not in the model, not under control (unmeasured variables) are assumed to be constant (have no measurable affect on human behavior).

Mathematical presentation of the model

To facilitate handling of the above mentioned model of human behavior, this model could be presented in mathematical form in terms of a set of equations expressing the functions and functionals among its parts and/or components. These equations are as follows:

\[ H = F(PV) \]  
Equation (1)

where, \( H \) = human behavior*

\( F \) = function **

\( PV \) = personal variables.

It is assumed that there are many personal variables which are capable

*The concepts employed in the model will be defined later in this chapter.

**A function is a rule that assigns to elements of a set \( S \) the elements of another set \( T \). (A collection of objects is defined as a set.)
of affecting the individual behavior. Thus Equation 1 could be written in the following form:

\[ H = F[PV = f(X_1, \ldots, X_j, \ldots, X_n)] \]

Equation (2)

where, \( X_1, X_2, \ldots, X_j, \ldots, \) and \( X_n \) are various individual's personal variables which are assumed to have affect on his behavior.

Another major factor affecting the individual's behavior as stated in the model is the situational conditions which are relevant to the individual actor. This relationship could be stated in the following form:

\[ H = F(SV) \]

Equation (3) *

where, \( SV = \) the situational conditions and/or variables which are relevant to the individual actor.

From previous research and theoretical statements it is apparent that there are numerous situational variables and/or conditions which might have influence and/or affect on the individual behavior. An attempt will be made to include those elements and/or situational variables in the development of the model equations. This could be done by modifying Equation 3 and restating it in the following form:

\[ H = F[SV = f(X_1, \ldots, X_j, \ldots, X_n)] \]

Equation (4)

* The unidentified elements in this equation and the following equations will be defined and all unmentioned elements will hold the previously stated definitions in other equations unless stated clearly otherwise.
where, $X_1, \ldots, X_j, \ldots, X_n$ are various situational variables.

From Equations 1 and 3 human behavior appears to have functional relation with both the individual's personal variables and the situational conditions and/or variables. Thus Equations 1 and 3 could be combined in one equation as it is stated in the following equation.

$$H = F(PV, SV) \quad \text{Equation (5)}$$

By substitution from Equations 2 and 4, Equation 6 could be written as follows:

$$H = F[PV = f_1(X_1, \ldots, X_j, \ldots, X_n);$$
$$SV = f_2(X_1, \ldots, X_j, \ldots, X_n)] \quad \text{Equation (6)}$$

where, $F = \text{function}$

$f = \text{functional}.$

This model presented in Equation 6 presents only the first part of the analytical model in regard to the factors which affect human behavior.

The second part of the analytical model may be stated as follows:

$$Q = F(OH) \quad \text{Equation (7)}$$

where, $Q = \text{consequences of the output of the individual's behavior practices}$

$F = \text{function},$

$OH = \text{output of the individual's behavior practices}.$

*Output of the individual's behavior practices such as overall productivity in the business firm as a result of managerial behavior and consequences will be economic success of the firm, etc.*
Also the model has assumed that output of the individual's behavior practices is a function of behavior. This functional relationship could be expressed in the following form:

\[ \text{OH} = F(\text{H}) \quad \text{Equation (8)} \]

However, human behavior could be conceptualized into categories or types. This will be done in the present study. Thus Equation 8 could be modified and presented as follows:

\[ \text{OH} = F[\text{H} = f(h_1, \ldots, h_r)] \quad \text{Equation (9)} \]

where, \( h_1 = \) type of behavior

\( r = \) number of types of behavior.

From Equations 7 and 8 the following equation could be derived and stated as follows:

\[ Q = F[\text{OH} = f(h)] \quad \text{Equation (10)} \]

and in more general form:

\[ Q = F(\text{OH}, \text{H}, \text{PV}, \text{SV}) \quad \text{Equation (11)} \]

Thus the overall analytical model could be written in very general form as follows:

\[ Q = F[f_1(X_1, \ldots, X_j, \ldots, X_n); f_2(X_1, \ldots, X_j, \ldots, X_n); f_m(X_1, \ldots, X_j, \ldots, X_n)] \quad \text{Equation (12)} \]

where, \( j = 1, \ldots, n \quad i = 1, \ldots, m. \)
This relationship in Equation 12 could be linear or curvilinear and will hold true as long as the study meets the assumptions of the developed analytical model.

The theoretical basis for this model will be discussed along with the presentation and the discussion of the concepts and/or the elements of the present study of management behavior or performance in farmer cooperatives. The discussion will be mostly theoretical at this stage. The first step will be to define and discuss the environment in which the manager makes and implements his decisions. More specifically, the approach to the first step will be:

(a) to discuss social systems at a general level,
(b) to discuss and present some aspects of special type of social system generally called formal organization, and
(c) to present some of the distinguishing characteristics of the formal organization under focus in this study, that is farmer cooperative.

The second step will be to discuss human behavior in general, the role of the manager in farmer cooperative, and types of management behavior in particular. The third step will be to present and discuss some selected individual personal variables and situational variables which are assumed to be related to types of management behavior. This will be followed with a discussion of the output of the individual behavior and its consequences.
Social Systems

The essential purpose of the following discussion of the concept social system is to gain a better understanding of the social system as a basis for a general context in which to analyze human behavior; in this particular case the behavior of the managers of farmer cooperatives.

In the literature of the social sciences, definitions of "system" seem to range from the minimal one which sees any set of variables regardless of the degree of interrelationships among them as a system (25), to the more complex system such as defined by Sorokin (89): a social system is a group of interacting individuals which "has as its raison d'etre a consistent set of meanings - values - norms that satisfies their need(s) and for whose use, enjoyment, maintenance, and growth the individuals are freely or coercively bound together into one collectivity with a definite and consistent set of law-norms prescribing their conduct and interrelationships..." (89, p. 27)

Within this range there are several ways in which conceptions of system vary. One is the dimension of autonomy. According to Sorokin (89), different social systems may be expected to have different degrees of autonomy in relation to their environments. Not clearly the same and not clearly a different dimension is Parsons' distinction between total and partial social systems (71). It is more apparent that Parsons is dealing with a different distinction when he says a social system is but one of three aspects of a complete system of action, the other two being individual actors' personality systems and the cultural system inherent in their action patterns. Each of the three is, Parsons (71) says, "an independent focus of the organization of the elements of the action system in the sense that no
one of them is theoretically reducible to terms of one or a combination of the other two. Each is indispensable to the other two in the sense that without personalities and culture there would be no social system and so on around the roster of logical possibilities." (71, p. 6)

Within the range of definitions of system there are various gradations of "systemness" in different conceptions of social systems. Bertalanffy (11) defines a system as, "a complex of elements standing in interaction" (11, p. 199). He regards this as sufficient for discerning "general principles holding for systems, irrespective of the nature of the component elements and of the relations or forces between them" (11, p. 199).

A little further along the scale of systemness is Hagen's (36) conception of an analytic model of defined elements and their interrelations.

"The relationships among the elements of a system are statements of the alternative values (magnitude) or states of one of the elements associated with alternative values or states of one or more of the other elements." (36, p. 506).

This at least suggests that a quantitative approach can be made to the mutual regressions of assorted variables upon each other. Moreover, Hagen (36) provides further useful definitions:

"A system which is interacting with its environment is an open system..." (36, p. 506)

and

"Elements of the system whose magnitudes are wholly determined by the environment." (36, p. 507)

and which therefore remain constant in the absence of environmental change "are termed parameters" (36, p. 507). And he offers the empirical assertion that all real life systems are open systems.

According to Loomis (57),
"The social system is composed of...the interaction of plurality of individual actors whose relations to each other are mutually oriented through the definition and mediation of a pattern of structured and shared symbols and expectations." (57, p. 4)

By this definition there is more to a system than just a complex of elements standing in interaction; the interaction must have symbolic and normative aspects. Thus it is apparent that Hagen conception of the social system differs from that of Loomis, especially in regard to the symbolic and normative aspects of the system.

While it is recognized that social systems are composed of individuals, the patterning of relationships are the important attributes of the system. In some social systems, the patterned interaction is very distinct, highly structured and persistent while in others it is less distinct, less structured and more transient. As stated by Loomis (57),

"Any level of interaction furnishes examples of social systems: the direct, face-to-face, personal interaction of two actors, or the indirect, enormously interlinked, impersonal interaction of a society." (57, p. 4)

In the development of his analytical framework of social system, Loomis uses three sets of concepts:

(1) specific social system elements,
(2) master processes, and
(3) conditions of social actions.

Loomis delineates nine specific elements of social systems:

(1) belief (knowledge) --any proposition about the universe which is thought to be true;
(2) sentiment--feeling about phenomena;
(3) end, goal or objective--change which members of a
social system expect to accomplish through appropriate interaction;

(4) norm--the standard which prescribe what is acceptable or unacceptable;

(5) status-role--that which is to be expected from an incumbent of any social position;

(6) power--capacity to control others;

(7) rank-power--the value an actor has for the system in which the rank is accorded;

(8) sanctions--rewards or penalties meted out by members of the system to attain conformity to its ends and norms; and

(9) facility--means used by the system to attain its ends.

The two-term entity, status-role, contains the concept of status, a structural element implying position and the concept role, a functional position. The concept of power used by Loomis has two major forms--authority and influence. Authority is defined as the right, as determined by the system, to control the actions of others. Influence may be regarded as control over others which is of non-authoritative nature (57).

Loomis sets forth six comprehensive or master processes:

(1) Communication--the process by which information, decisions and directives pass through the system and provide data upon which beliefs are gained and sentiments are formed or modified;

(2) boundary maintenance--the process by which the social system retains its solidarity, identity and interaction
patterns;

(3) systemic linkage—the process whereby the elements of at least two social systems come to be articulated so that in some ways they function as a single system;

(4) socialization—the process whereby social and cultural heritage is transmitted;

(5) social control—the process by which deviation is counteracted; and

(6) institutionalization—the process whereby human behavior is made predictable and patterned and social systems are given the elements of structure and the processes of function (57).

Also, Loomis differentiates, for analytical purposes, between the external pattern and internal pattern of a social system. An external pattern is:

"A pattern of interaction which displays the relations necessary for the group's adjustment to its environment and for the attainment of its goals." (57, p. 40)

"The internal pattern is a pattern of interaction which consists of those relations that focus upon the expression of sentiments of system members toward one another." (57, p. 42)

Another definition in the sociological literature is that of Homans (45),

"The activities, interactions, and sentiments of the group members, together with the mutual relations of these elements with one another during the time the group is active, constitute what we shall call the social system." (45, p. 87)

Homans is known also for his subdivision of the social system into two parts—the external system, or "the state of these elements and of
their interrelations, so far as it constitutes a solution... of the problem: How shall the group survive in its environment?" and the internal system, or "the elaboration of group behavior that simultaneously arises out of the external system and reacts upon it" (45, p. 90). Eleven years later, Homans changed his mind somewhat and suggested in lieu of the term "external system" a less pretentious word, "givens." For sociologists who might not wish to be that unpretentious, he suggested such alternatives as "parameters" or "boundary conditions." By whatever label, he said, they are not always related to each other in such a way as to constitute a system (46). But even with this stipulation, it is doubtful whether Homans' conception of a social system's parameters is synonymous with Hagen's.

For Homans, a social system is something characterizing a human group of any size, and varying degrees of autonomy, from the workers in the Bank Wiring Room to the inhabitants of a Polynesian island.

Loomis seems to regard the social system ambiguity as a virtue, for he says,

"The concept of the social system enables the analytic observer to move from a given subsystem to the larger societal system and back again. It is equally legitimate to examine American society and the relations of the doctor and his patient, since both constitute social systems exhibiting an orderly uniformity of interaction." (57, p. 4)

But it is questionable whether all social systems have the same kind of uniformity, though Loomis asserts that for all social systems "the elements that constitute it...and the processes that articulate it remain the same" (57, p. 5).
By Loomis' definition, as previously stated, a social system involves shared symbols and expectations, but he has gone even farther in saying that since a system implies order, "a major criterion for delineating a social system is simply the existence of consensus with respect to the appropriate ways of behaving and doing things" (57, p. 17).

From the above discussion one might conclude that there are many types of social systems. Various criteria can be used in classifying and naming social systems. In this study, the major concern is with the farmer cooperatives which is conceived to be a specific instance of a social system. Also, the farmer cooperative may be further conceptualized as a special type of formal organization. Formal organizations are conceptualized as a general type of social system. Formal organizations will be discussed to provide insights about the role of the manager (or operational manager) in a local farmer cooperative.

**Formal Organizations**

As well as being viewed as a special type of social system, the business association (farmer cooperative) can be viewed as a formal organization. In this study, the formal organization will be viewed as a special type of social system.

**Views about organizations**

The study of organizations is both new and old. Writings about organizations can be traced back for thousands of years. As a result, there are a number of different schools of thought and a number of literatures on organizations. One of the difficulties in dealing with the
subject today is this multiplicity of literatures.

Scott (86) in a review and an appraisal of the various approaches to theory of organizations lists three general classifications--classical doctrine, neoclassical theory and modern organization theory. Each approach will be briefly presented.

**Classical organization theory** According to Scott (86) classical organization theory is built around four key pillars. They are the division of labor, the scalar and functional processes, structure, and span of control. Given these major elements just about all of classical organization theory can be derived.

1. The division of labor is without doubt the cornerstone among the four elements. From it the other elements flow as corollaries. For example, scalar and functional growth requires specialization and departmentalization of functions. Organization structure is naturally dependent upon the specialization of activities in company development. Finally, span of control problems result from the number of specialized functions under the jurisdiction of a manager (86).

2. The scalar and functional processes deal with the vertical and horizontal growth of the organization, respectively. The scalar process refers to the growth of the chain of command, the delegation of authority and responsibility, unity of command, and the obligation to report. The division of the organization into specialized parts and the regrouping of the parts into compatible units are
matters pertaining to the functional process. This process focuses on the horizontal evolution of the line and staff in a formal organization.

3. Structure is the logical relationships of functions in an organization, arranged to accomplish the objectives of the organization efficiently. Structure implies system and pattern. Classical organization theory usually works with two basic structures, the line and the staff. Again, structure is the vehicle for introducing logical and consistent relationships among the diverse functions which comprise the organization.

4. The span of control concept relates to the number of subordinates a manager can effectively supervise. Span of control has significance, in part, for the shape of the organization which evolves through growth. Wide span yields a flat structure; narrow span results in a tall structure. Further, the span concept directs attention to the complexity of human and functional interrelationships in an organization.

It would not be fair to say that the classical school is unaware of the day-to-day administrative problems of the organization. Paramount among these problems are those stemming from human interactions. But the interplay of individual personality, informal groups, interorganizational conflict, and the decision-making processes in the formal structure appears largely to be neglected by classical organization theory. Additionally, the classical theory overlooks the contributions of the
behavioral sciences by failing to incorporate them in its doctrine in any systematic way. In summary, classical organization theory has relevant insights into the nature of organization, but the value of this theory is limited by its narrow concentration on the formal anatomy of organization.

**Neoclassical organization theory** Generally, the neoclassical approach takes the postulates of the classical school, regarding the pillars of organization as givens. But these postulates are regarded as modified by people, acting independently or within the context of the informal organization. One of the main contributions of the neoclassical school according to Scott (86) is the introduction of behavioral sciences in an integrated fashion into the theory of organization. Through the use of these sciences, the human relationists demonstrate how the pillars of the classical doctrine are affected by the impact of human actions. Further, the neoclassical approach includes a systematic treatment of the informal organization, showing its influence on the formal structure.

Thus, the neoclassical approach to organization theory according to Scott (86) gives evidence of accepting classical doctrine, but superimposing on it modifications resulting from individual behavior, and the influence of the informal group. In summary, the neoclassical approach has provided valuable contributions to the understanding of organizations. But, like the classical theory, the neoclassical doctrine suffers from incompleteness and lack of integration among the many facets of human behavior studied by it. However, modern organization theory has made a move to cover the shortcomings of the current body of theoretical
Modern organization theory views the organization as a system. In discussing modern organization theory, Scott (86) states:

"The distinctive qualities of modern organization theory are its conceptual-analytical base, its reliance on empirical research data and, above all, its integrating nature. These qualities are framed in a philosophy which accepts the premise that the only meaningful way to study organization is to study it as a system... Modern organization theory asks a range of interrelated questions which are not seriously considered by the two other theories.

Key among these questions are: (1) what are the strategic parts of the system? (2) what is the nature of their mutual dependency? (3) what are the main processes in the system which link the parts together and facilitate their adjustment to each other? (4) what are the goals sought by systems?" (86, p. 19)

Scott (86) lists the ingredients involved in system analysis as the parts, the interactions, the processes and the goals of the system. The parts are delineated by Scott as the individual and the personality structure he brings to the organization, formal organization, informal organization, status and role patterns and physical setting. A set of processes link the parts. Those mentioned by Scott are communication, balance and decision making. For Scott, "Balance refers to an equilibrating mechanism whereby the various parts of the system are maintained in a harmoniously structured relationship to each other." (86, p. 21)

In his discussion of goals of organizations, Scott lists three goals--growth, stability and interaction--which may be intermeshed or independent ends in themselves. For Scott, interaction in the goal framework "... refers to organizations which exist primarily to provide a medium for
association of its members with others." (86, p. 22)

In summary, modern organization theory needs tools of analysis and a conceptual framework uniquely its own, but it must also allow for the incorporation of relevant contributions of many fields. It may be that the framework will come from general system theory. Areas of research such as decision theory, information theory, and cybernetics also offer reasonable expectations of analytical and conceptual tools. Modern organization theory represents a frontier of research which has great significance for management. The potential is great, because it offers the opportunity for uniting what is valuable in classical theory with the social and physical sciences into a systematic and integrated conception of human organization.

The contributions to an ultimate theory about organizations as Warren (94) concluded are coming from many diverse fields. Some of these fields include management science, operations research, psychology, anthropology, sociology, political science, social psychology, mathematics, economics, statistics and management itself. People in all of these fields are conducting research about organizations, or some aspects of behavior in organizations, or organization activities. However, at the present time an integrated or unified theory does not exist which can be used to generate hypotheses about management.

Distinguishing characteristics

There are several theoretical treatments of formal organizations and an abundance of literature on specific aspects of formal organizations (94). As noted in the preceding discussion, there are several schools
of thought and the study of organizations has been approached from many different viewpoints. As pointed out earlier, the central emphasis of this study is on the operational manager in the local retail farm supply cooperative and the impact of his management on the outcomes of that cooperative association. If the cooperative association was the basic unit of analysis a much more detailed discussion of formal organizations and the interrelation of the cooperative associations with other social systems and the environment would be warranted. In the present study, the primary purpose of the presentation is to describe the environment of the manager and to provide a framework for the analysis of selected variables concerning his behavior and the related association outcomes. The major unit of analysis is the manager and the major social system environment context is the social system, formal organization, farmer cooperative.

Within the context just outlined, the intent of this section is to isolate some of the major characteristics which distinguish farmer cooperative associations as formal organizations from other social systems not to discuss all characteristics of formal organizations. The concepts selected to isolate major characteristics are 1) goals, 2) membership, 3) democratic control.

Goals

One of the major distinctions between formal and informal groups is made on the basis that at the time of origin the formal group and its structure were created and organized to achieve specific goal(s). Three important aspects according to Warren (94) are important in this distinction:

(1) the organization was deliberately established and
(2) the formal structure was consciously planned
(3) for the purpose to achieve certain goals.

Formal organizations do not just arise from the social interaction of individuals but was organized and planned to help achieve certain goals. Over time, the social structure and the goals of the formal organization are a result of internal and external influences. Present in every organization which has some duration are formal and informal relations among the individuals in the organization as well as formal and informal structures. Although the distinction between formal and informal is relative, informal groups in formal organizations are social systems which emerge from the interaction of individuals. Although bearing on goal attainment, they were not usually deliberately created or organized by the formal organization for specific ends. The informal structure was not deliberately or consciously created or planned. While attention has been called to the primacy of goal attainment for the formal organization, this does not imply the organization has only one goal or all individuals and subsystems in the formal organization have the same goal(s) as the organization.

The organization provides a means of goal attainment. Because of the goal-directedness of the formal organization, goals have a profound influence on the characteristics of the organization. In fact, goal primacy is the basic reason for the existence and continued existence of the formal organization.

As stated before farmer cooperative is a special type of the social system, it is a formal organization with some unique characteristics.
Farmer cooperative has a number of goals similar to other formal organizations. However, the major and most important goal of farmer cooperatives is maximizing the income of their individual members by providing them with multi-services at reasonable costs** , ***, †.

Membership

Some formal organizations have restricted membership patterns. However, farmer cooperatives as formal organizations have open membership. Anyone, man or woman, at least up to a fixed number in some cases, could join the cooperative on equal terms with the original members.

The principal of open membership, while a good one, has to be qualified. In most cases, however, membership or withdrawal from membership is voluntary.

Democratic control

Different formal organizations sometimes have different types of administrations. Some tend to be democratic, others are not. One of the unique characteristics of farmer cooperative is its

*For further details regarding the goals of farmer cooperatives see Bernard Oliver McCabe (61a).

**By definition a cooperative is a multilateral agreement among farm firms to operate a plant jointly in order to provide themselves with goods and services at cost.

***For further details regarding the economic nature of a cooperative see Richard Phillips (73).

†For further details regarding the theory of cooperation see Frank Robotka (80).
democratic control. A cooperative is brought into being by its members, that it exists to further their interests and that those who administer its affairs ... must be chosen directly or indirectly by the members and enjoy their confidence (76).

Another democratic principle of farmer cooperatives is that of one man, one vote. This was based on the belief that the person, rather than his stock investment, should be the basis of voting (82). This principle is basically adhered to the majority of cooperatives.

In summary the essential purpose of the above discussion was to gain better understanding of the social system in which the manager plays an important role as its planner, organizer, coordinator, and director. A discussion of the manager's role in this type of formal organization will follow after a theoretical discussion of human behavior.

Human Behavior

For an understanding of human behavior, both the individual acting person and the social situation must be considered. Human behavior does not take place in a vacuum, but in a world of perceived reality. In this world the relevant aspects of the physical and social world are combined in a slightly differential manner by each individual. It becomes necessary to determine some of the variables involved as individuals interpret their physical and social world. Berelson and Steiner (9) state:

"How people come to know and interpret their world is fundamental to the understanding of human behavior, since behavior, as distinct from sheer motion, is action that takes environment into account." (9, p. 87)
Rose (81) states:

"...culture, directly or indirectly, makes possible an individual's experience and gives form to an individual's reactions. And, to a certain extent, the individual's personality consists of his past experiences and his recurrent reactions to stimuli, (that is his consistent behavior)." (81, p. 147)

Many sociologists perceive man as being born into the world with certain potentialities which have been biologically determined (intelligence parameter, physical size, resistances or susceptibility to certain bodily ills, etc.). He is also born with a predisposition to act, i.e., sustain physical movement. Because of the unique nature of his intelligence he has a penchant for placing all the phenomena which he perceives into patterns of meaningful interrelationships--man is an organizing being. He organizes the world around him into patterns of cause and effect which to him are rational. Since, in many instances, he does this without taking into consideration all of the data that are known or possible to know, he sometimes assigns relationships to phenomena which are spurious, from the point of view of scientific fact (12).

**Ability to deal with abstractions**

An attribute of man which clearly differentiates him from lower animals concerns his ability to deal with abstractions. It is considered to be an aspect of the social being of vital significance to an understanding of effective and efficient communication.

In contrast to the here and now existence of lower animals, man has developed a remarkable power of handling concepts, facilitated by language, which makes it possible for him to deal with more than the present. He can think of things in their absence; he can think about
classes of things; he can think about the likely future, still unexperienced, happenings. And all these abstractions and generalities can encompass a broad time perspective—past, present, and future (49).

Man has the ability to abstract and form concepts; he can abstract further and form more general concepts. His concepts and his language seem potentially capable of unlimited development.

Fundamentally, the human's capability of dealing with abstractions involves the recall of mental images of past experiences, the making of value judgments about them, and the projection of the evaluation into the future. The use of this capacity makes it possible for man to make use of his own experience as well as those of his fellow men, living and dead, through communication systems (49).

By thinking in abstraction and projecting himself into the future, man establishes goals toward which he can direct his actions and anticipate problems which will confront him. In addition, due to this human ability, he is capable of having a mental conception of himself as a social being. On the basis of his interpretation of how others perceive him, he develops a self-image which tends to determine to a great extent his interests and behavior. He also can consider these evaluations and expectations of his fellow men in terms of their potentialities for enhancing or impeding the attainment of goals which he desires.

By using his ability to think about abstractions and to project himself into the future, man can establish in his mind the things he wants in the future, as well as when he wants them. It is possible for him to communicate his complex thoughts to others and in turn receive similar communication from them.
Because man has ability to deal with abstraction, he responds to stimuli in a different way than other forms of life. Man not only can think this way, but as a social being it is necessary that he does. Upon receiving stimuli, the individual interprets it on the basis of his accumulated experiences and responds accordingly (49).

As stated, man is able to go through the process of perceiving interrelationships because he has the ability to deal with abstractions. He can create symbols in his mind which have empirical referents in the universe about him. This frees him of the necessity of being in immediate sensory contact with phenomena in order to respond to them or act in relationship to them. This faculty is unique to man.

Because man has this ability to deal with abstractions and communicate via exchange of symbols with meanings, he has another uniqueness. Man is the only form of life which is faced with the necessity of making a distinction between those things which are real and those which are possible. All the forms below him must have sensory experience with real things in order to respond to them. There is no future for any life form which cannot use symbols in its mental operations. Possibilities are always in the frame of reference of the future. "Since all life forms except man respond directly to stimuli, their behavior is much more easily predicted than that of man" (12, p. 3). They respond in what is called the simple reflex arc, stimulus response (12).

It follows then that most of man's behavior is largely structured by his social environment. Of great significance in this respect is man's ability to recall mental images of his previous experience and project himself into the future. Man's responses to current stimuli from
his environment are therefore based largely upon his interpretations of what the "meaning" of the stimuli he is receiving represents to him. According to Bohlen and Beal (12), man never responds to a stimulus perse. Whenever a human being is faced with a stimulus or problem he responds not to it, but to the interpretation which he places upon it. He deals not only with realities of the situation but the possibilities of it. Since he can deal in symbols he can project himself into the future and mentally create alternative courses of action which he can in turn evaluate and make choices re this evaluation.

Bohlen and Beal (12) stated that in order to discuss the above more concretely, it is necessary to move to the lowest common denominator of human behavior, that which will be operationally called the unit act.

The unit act

The social act, according to Mead, is an act, "in which one individual serves in his action as a stimulus to a response from another individual" (48, p. 321). It's important character, he maintained, is not imitation but the process of interstimulation in which the participating forms in a social act engage and which links them functionally together in a common social situation. Mead stated, "the important character of the social organization of conduct is not that one form in a social group does what the others do, but that the conduct of one form is a stimulus to another to certain act, and that this act again becomes a stimulus to the first to a certain reaction, and so on in ceaseless interaction. This is suggested by the descriptive phrase conversation of attitudes" (48, p. 321).
According to Bohlen and Beal (12), the unit act consists of:

1. the receipt of a stimulus,
2. the interpretation of this stimulus, and the circumstances under which it was received and
3. a response or an action.

As contrasted to the simple stimulus-response man thinks in terms of stimulus--interpretation--response.

Beal et al. (8) delineated five phases of the mental process involved in interpreting stimuli. They stated,

"...interpretation of stimuli include:

1. recall of similar stimuli received in the past;
2. responses made to these similar stimuli;
3. comparison of the existing circumstances surrounding the immediate stimulus to which he anticipates responding with the conditions surrounding the response patterns of the past experiences;
4. evaluations of the relative satisfactions received from the ways in which he responded in the past; and
5. an evaluation and comparison of the goals and ends which he desired when he responded to former stimuli with the goals or ends which he hopes to achieve in responding to the present stimulus." (8, p. 51)

It is only after an individual has gone through these five phases of the process that he indirectly responds to the stimulus. The response may be to do nothing or not to act overtly in relation to the stimulus. This is an act itself.

The personality of man is molded by a series of events which are a part of his experience world. When he receives a similar stimulus repeatedly and each time responds in a similar manner which gives him
satisfaction, the interpretation moves from the intricate level dis­
cussed above to a cursory recognition that the stimulus is a familiar
one. When this takes place an individual has formed a habit; a conven­
tion by which he copes with relatively similar and familiar stimuli with
a minimum of intellectual effort.

Dewey stated,

"All virtues and vices are habits which incorporate
objective forces. They are interactions of elements
contributed by the make-up of an individual with elements
supplied by the out-door world." (22, p. 16)

also

"To a considerable extent customs, or wide-spread
uniformities of habit, exist because individuals face
the same situation and react in like fashion." (22, p. 58)

This allows an individual to do many routine things very quickly
and to utilize time for interpretation of new or relatively unique stimuli.

Because, as was pointed out earlier, man can deal with symbols which
have empirical referents without being within sensory proximity of these
referents, his experience world consists of those experiences in which
he was an active participant and other experiences of other men, with
which he is familiar, which took place at other times and in other
places. To the scholar who makes the most of this, the accrued experi­
ences of all civilized mankind are available for use in making decisions.
Since most of these accrued learnings are in the form of the written
word, the semi literate or illiterate have available to them only those
experiences in which they have personally participated or have heard by
word-of-mouth. Thus, personal characteristics such as literacy is an
important factor in the process of decision-making.
However, each man builds up his experience world, he makes judgments about each of these experiences as he has them. He evaluates them in terms of the relative satisfactions he gained. He judges them to be good, bad or indifferent. Through these processes, he develops his beliefs and attitudes in relation to them.

From the above general discussion of human behavior, it is apparent that human behavior is highly complicated and subject to the affect of individual capabilities and the factors surrounding the individual actor. It is evident that no one single study could deal with all types and/or aspects of human behavior. This study as previously stated deals only with one type of human behavior, that is management behavior. In the succeeding sections of this chapter the manager role will be discussed followed with a definition of his role as manager of a farmer cooperative as the body of this section develops.

Role: a specification of behavior

Even a cursory review of introductory sociological texts serves to indicate both the wide use of the concept role and its utility in sociological theory. Conceived as a basic element in societal structure, role is typically defined as "...a pattern of behavior associated with a distinctive social position" (14, p. 16). After examining several definitions of role, Gross, et al. (35) conclude:

*The discussion of role here follow closely that of Daniel H. Himes (40).
"We feel that theoretical formulations concerned with role analysis must include these three elements--social locations, behavior, and expectations--which are common to most of the definitions of role which have been considered." (35, p. 18)

The conceptual framework of Gross et al. (35) developed in their analysis of school superintendents is one of the few relatively comprehensive analysis dealing with this concept at both the theoretical and empirical levels. It specifies various elements in the process of delimiting behavior which are useful in focusing upon the problem of concern in this thesis. For these reasons, various elements of the conceptualization of Gross et al. will be adopted for the present problem. The complete framework will not be presented, rather the presentation will include only those essentials which will assist in the specification of the manager's role. More precise explication of their definition will now be undertaken.

**Role: position**

As noted by Gross et al. (35), one of the elements in common definitions of role includes the idea of social locations. "The term *position* will be used to refer to the location of an actor or class of actors in a system of social relationships" (35, p. 48). As previously stated, the farmer cooperative can be viewed as a social system, as can all formal organizations, and as such is ultimately a sub-system of the society in which it occurs with all the attendant linkages and relationships that occur among sub-systems in a society. Since every position is defined as a part of a system of positions "...no one position has any meaning apart from the other positions to which it is related" (65, p. 277). As Gross et al. (35), note, a complete specification of all positions involved would be impossible to deal with
empirically. Therefore, the position under study, i.e., the focal position, and only a limited number of other positions, i.e., counter positions, need be specified. A positional sector, then, is "... specified by the relationships of a focal position to a single counter position..." and is thus an element of the relational specification of the position (35, p. 52).

The general managers of farmer cooperatives are incumbents of a particular position within a social system and the general nature of this position (the focal position) must now be specified. Noting that a particular position (status) is usually associated with a complement of role relationships, Merton (62) has termed this phenomena "role-set" (62, p. 369). The relational nature of this conceptualization, as well as that of Gross et al. (35) and Newcomb (65) must be emphasized. In the present example, the position of the manager has no meaning apart from its relationship to that of the employees, the board of directors, and the patron-members. The relationships between the board of directors, the manager, the employee, and the members of the farmer cooperative is presented in Figure 2.

The first set of positional sectors specifying the position of manager in a cooperative is that concerned with his subordinates. In many cases this will include a single positional sector formed in relation to an assistant manager and several sectors formed in relation to the several "key" employees. Of course, the precise number in this group of sectors is a function of the size of the cooperative and thus the number of employees. A particular cooperative may or may not have an assistant manager and other key employees such as bookkeeper and various
Figure 2. The relationships between the board of directors, the manager, the employee, and the members of the farmer cooperative.
department heads. However, the manager's responsibility to the various subordinates has common elements such as authority to hire and fire, delegation of authority, and direction. For this reason, these positional sectors will be considered as a group.

A second primary set of positional sectors specifying the managerial position is that set formed in relation to the board of directors. In a cooperative, the members elect a board of directors which is to handle major policy decisions regarding the formation and functioning of the cooperative. This board consists of several members who have periodic meetings with the management staff of the cooperative (this includes the manager, often an assistant manager, and occasionally one or more key employees). Here policies are set and practices established which determine the extent of the authority of the manager and in general establish certain limits for his managerial behavior. Though there is variance in the significance of certain positional elements in this group (for example, the president of the board is in a more influential position than the others), this variance is not considerable. A possible reason for this is that the president is elected from the board members and consequently at any one time the composition of the board may be such that several members have had experience as its president. Another factor limiting this variance is that the size of the boards of directors does not vary greatly among the cooperatives, usually between six and ten. For these reasons the positional sectors dealing with members of the board of directors will also be considered as a group.

A third group of positional sectors will be mentioned briefly. These are the farmer members of the cooperative. The type of contact
they have with the manager necessitates their mention for completeness in describing the relationships within the social system. In terms of the formal hierarchical authority structure of the cooperative, their relationships are not as direct with the manager as are those of the other two groups. Norms covering formal authority in cooperatives indicate that when authority is exerted upon the manager it is brought to bear through the board or one or more board members or at the annual meeting. However, the frequent and intimate service a manager is required to render to each member provides much opportunity for members to exert influence in defining the manager's role. This opportunity must be recognized in specifying the manager's behavior, for his behavior is dependent upon his unique location in the social system wherein he is subject both to forces of influence and forces of authority.

Gross et al. (35) note that in addition to specifying the relationship between the focal position (manager) and a series of counter positions the social system cannot be fully specified until the relationships between the counter positions are also specified (35). Though this is not the central focus of this thesis, several comments are relevant here. The relationships between the counter positions involving the employees and those involving the board members are not direct in terms of the formal authority structure of the social system. Responsibility for the functions and performance of the employees falls on the manager, not on the board. Similarly, the relationships involving the members and the employees are indirect as defined by the formal cooperative authority structure. Members with complaints concerning one or several employees express them to the board, or to the manager. An important
direct connection between counter position sets is that between the members and the board of directors. The legal structure of cooperatives defines the members as entrepreneurs who shoulder the basic risk-bearing and decision-making responsibilities of the business and who select the board of directors from among themselves.

Specification of the three groups of counter positions (employees, board members, and members) delimits the social system under consideration. However, the focal position may be involved with other systems (35). In considering the managers of farmer cooperatives there are three groups of counter positions in social systems outside that of the cooperative itself which should be mentioned. The first of these groups is customers. Although members of the cooperative were mentioned above, a distinction between these two groups and the degree of overlap should be noted. As the earlier discussion on the nature and purposes of the cooperative pointed out, the intended purpose was to increase, by extension of the farm to an additional plant, the profits accruing to that farm. The cooperative members would thus in theory do all, or as nearly all as possible, of their business with the cooperative simply because they own the plant and thus reap the greatest financial reward. In practice, however, members often regard their cooperative as simply another business and thus do not patronize it as fully as they could. Also, non-members do patronize the cooperative for various reasons. For purposes of this thesis customers will refer only to non-members who patronize the business. Patron-members refers to those members who do use the cooperative though in varying degrees. Members will refer to all members regardless of their patronage habits.
The second group of extra-system positional sectors is that regarding suppliers. Positional sectors are most often found in this regard in relationship with salesmen. Salesmen approaching a cooperative represent regional cooperatives as well as independent companies. The third group of extra-system sectors is in regards to the help and advice a manager gets in running his business. These advisors may take the form of lawyers, management consultants, accountants, or academicians (through numerous management schools and courses). In each of these three groups of extra-system positional sectors there will be many sectors with many types of positions and incumbents.

Role: expectations The second definitional element of the concept role is that of expectations (35). An expectation is the element which refers to "an evaluative standard applied to an incumbent of a position" (35, p. 371). Thus, an expectation is what an actor should do in a position; a normative criterion applied to his behavior.

When analysis of a particular role is undertaken and its position in a social system is specified an important question must be asked. What group of people or positional sectors in the system are the ones to be used for defining the role? That there is variation in the definitions of a particular role among any populations a researcher would care to specify is now widely recognized in the literature. Merton (62) calls "conflicting role-expectation" the "...major structural basis for potential disturbance of a stable role-set" (61, p. 371). Gross and his colleagues (25) extensively reviewed the literature which has, in the main, postulated consensus in role definitions, and they go on to outline the obvious difficulties with this postulate. Within the setting
of the manager of the farmer cooperative, positional specification of his role yielded five significant sets or groups of role definers. They were the board of directors, employees, members, customers, suppliers, and advisors. There can be little doubt that there will be conflict between the various role definitions held by individuals representing these various groups. In fact, as Gross et al. (35) note, there will likely be variation within any particular group of role definers. The essence of their point is that "the degree of consensus on expectations associated with positions is an empirical variable" which should be examined (35, p. 43).

The analysis in this study is not focused upon role consensus but, rather, on role performance. However, a set of expectations must be specified in order to develop measures of role performance. In this study, advisors, and specifically, academicians will be used as the role definers. It may be asked whether this is a meaningful set of role definers for the manager for if it is not, behavior can not be expected to order itself around the expectations so defined. A more or less random congruence would be the maximum expected. However, management training schools, college and business school courses in management, and management consultants have had a definite influence in shaping the standards in performance expected of managers. Most managers in this study have been exposed to one or more of these influences. Over sixty per cent of the managers interviewed had attended some type of management class or short-course in the past two years. It is through these channels that academicians have funneled their theoretical and empirical work back to its field of applicability. In this way, academicians are
and have been significant role definers for managers.

The role definition used in this study and its content will be set forth in the section discussing management.

Role: behavior The third element in the definition of role is that of behavior (35). The incumbent of any social position by definition behaves in that position whether his behavior corresponds to a particular set of expectations or not. The distinction between actual behavior and expectations is also an important one for, "Networks of positions can be analyzed with respect to either how the incumbents of the positions should interact with each other or how they actually do interact with each other" (35, p. 58).

This distinction is important at present for in order to attempt to predict the "relative success" of a manager of a farmer cooperative, a normative standard must be applied to the outcome of performance in his role. Relative success, as a normative term, is often defined in American society in terms of economic efficiency. This, then, is the normative standard or evaluative criterion which is applied to a position incumbent—a manager.

Role then is defined as "... a set of expectations, or in terms of the present definition of expectations, it is a set of evaluative standards applied to an incumbent of a particular position" (35, p. 60). Roles, as could positions, can be broken into sectors. "A role sector is defined as a set of expectations applied to the relationship of a focal position to a single counter position" (35, p. 62). The behavioral component of role can be definitionally explicated in a similar manner. The important concepts are as follows:
A role behavior is an actual performance of an incumbent of a position which can be referred to an expectation for an incumbent of that position.

A role attribute is an actual quality of an incumbent of a position which can be referred to an expectation for an incumbent of that position.

A role behavior sector is a set of actual behaviors which can be referred to a set of expectations for behaviors applied to the relationship of a focal position to a single counter position.

A role attribute sector is a set of actual attributes which can be referred to a set of expectations for attributes applied to the relationships of a focal position to a single counter position (35, p. 64).

Management Behavior

Management definitions

Some authorities justifiably seek to describe management rather than define it. The objection to this practice is that several pages of description tend to throw a haze about a word which can be defined satisfactorily. Several definitions may be analyzed to determine what they have in common.

The ASME (American Society of Mechanical Engineers), as cited by Hodges and Ziegler (43), calls management "the art and science of preparing, organizing, and directing human effort applied to control the forces and utilize the materials of nature for the benefit of man" (43,
Management proper is the function in industry concerned in the execution of policy, within the limits set up by the administration, and the employment of the organization for the particular objects before it" (87, p. 32). A more recent definition is Nelson's (64): "Management in business is the science and art of combining ideas, facilities, processes, materials, and people to produce and market a worthy product or service profitably" (64, p. 4). Petersen and Plowman (72) define management in general as "a technique by means of which the purposes and objectives of a particular human group are determined, clarified, and effectuated" (72, p. 33).

These are only four of a large number of definitions, but there is no reason to believe that they are not typical of the literature as a whole. Superficially, there appears to be a lot of disagreement among them. For example, Nelson and the ASME agree on calling management "a science and an art," whereas Sheldon refers to it as a "function" and Petersen and Plowman as a "technique." Perhaps a more important disagreement is the question of what it is that is being managed. The ASME says "human efforts"; Sheldon says "the organization"; Petersen and Plowman say "a particular human group": and Nelson says "ideas, facilities, processes, materials, and people." Fayol (30) confines management to human relations but includes material factors as an essential part of his definition of organization.

Finally, the goals of the managerial process are all stated differently: "To control the forces and utilize the materials of nature for the benefit of man": "the employment of the organization for the particular objects set before it": "to produce and market a worthy product or
service profitably"; "to determine, clarify, and effectuate the objec-
tives of a particular human group." Despite this diversity in the
statement of goals, it may be noted that all of these writers agree that
orientation to goals, whatever they may be, is an integral part of the
definition of management.

For the purpose of this thesis management will be defined as the
functions which help in the accomplishment of objectives through the use
of men, materials, and machines. This definition seems to have the
virtues of simplicity and generality. It might be argued that the
inclusion of machines seriously narrows the applicability of the defini-
tion. And yet, it is difficult today to think of any enterprise, economic
or otherwise, where the use of machines—from the office typewriter to
the fully automatic plant—is not a factor to be taken into consideration
by the manager.

It was pointed out that Nelson (64) and the ASME both refer to
management as "a science and an art." The distinction may be useful.
It may well be that the techniques involved in the managerial process
make up the science of management, whereas the task of obtaining the
cooperation of employees in accepting any activity using these techniques
is the art of management.

Management as defined by specific functions

Sometimes management is defined as the coordination of men, materials,
machines, money, and markets. This definition has much to recommend it,
but the difficulty with calling management the coordinator of activities
is that coordination may be conceptualized as merely one of the important
functions of management. Besides coordinating, management may be conceptualized as involving other activities as planning, organizing, directing, and controlling. Indeed, this is the way in which the most famous of French authorities on the subject, Henri Fayol, defined management: "To manage is to forecast and plan, to organize, to command, to coordinate, and to control" (30, pp. 5-6). This way of breaking down the management process into five distinct functions, or phases, has come into wide use by writers on management. This scheme will be used in this thesis as a convenient operational definition of management. This scheme will be discussed in further detail later in this chapter.

Levels of management

The level of organization which Parsons (70) calls "institutional" (which grants "legitimation" to an organization by describing in broad policy terms what it may legitimately do), the "zone one" level of management as described by Holden and his associates (44), and what Phillips (74) calls "overall" management all appear to present the same level of managerial function. The same function and/or level of management has been identified by many writers as overall policy-making and/or administration function. This function is performed in the farmer cooperative by the board of directors elected from the members of the cooperative. Phillips (74) describes, the functions in overall planning and organizing, the high level administrative process as including:

"...(1) the basic organizational structure of the business and its relationship to its owners, (2) the financial structure for the business, (3) setting up the merchandising operation, and (4) planning plant and facilities for an efficient and low cost operation." (74, p. 211).
Within the limits and policies set by overall management or the administration, the manager, quite often called the operational manager, is given the objective of accomplishing the objectives of the business usually economic objectives. The full responsibility for operational management is normally assumed by the manager of a cooperative. As Baumel notes, some of the actual management duties may be delegated to employees and employees may influence the manager's decisions yet the employee's contribution to operational management may be imputed to the manager. "...since, in the long run, he (the manager) is responsible for selecting high caliber employees" (6, p. 6). The manager of a cooperative then must operate within a set of "givens" including plant and facility location, certain assets of the business, "... the financial structure, the labor resources, basic operating policies and the market situation" (7, p. 857).

Over a longer period of time however the manager has some influence on certain elements of the given situation.

"For example, he normally has authority to vary the level of some inputs, such as changing the composition of current assets and the quality of labor. He can modify the financial structure by altering the composition of the current liability accounts." (7, p. 858)

In his role as advisor to overall management or overall administration, the manager is also in a position to influence basic policies of the business. Thus the level of output and profit of the business is in part a function of the practices of the manager. In other words the

*Hereinafter the term management will be used in place of the term operational management, however, it will not change the meaning of the latter.*
level of output and profit of the business is in part a function of the management behavior performed by the manager.

The functions of the manager

The first step in analyzing the task of managing is to break down the managerial job into those functions that distinguish it from operating tasks such as selling, manufacturing, accounting, engineering, and purchasing, which the business or other enterprise may undertake to gain its objectives. Although such activities may differ from one business to another or between a business enterprise and such other operations as a government, a university, or a church, the functions of the manager tend to be universal and common to all organized human activity.

Although there is some disagreement among scholars and practitioners of management as to the functions of the manager (and the development of a theory and science of management suffers thereby), a pattern of managerial functions has tended to emerge. The pattern adopted here is to classify these functions as much as possible in accordance with the general practice and terminology used by business managers and managers in many other fields. Doing so avoids artificial terminology, and researchers and businessmen will not need to learn new and different definitions; rather, they may be forced to use these terms with greater precision. It is also hoped that managers, finding available common terms with ordinary meanings, will be encouraged to adopt an increasingly scientific approach to the important task of managing.

The manager today thinks in terms of functions rather than in terms of specific operations and specific methods, which should be the responsibilities of subordinates. What are these functions? There are several
answers to this question. Many authors have used different breakdowns for the functions of management. However, and this cannot be stressed too strongly, they appear to be talking about the same things. Hereinafter some of those classifications of management functions will be presented and finally a broader classification combining most of the ideas of various writers will be developed.

Allen (4) defined management functions in general "as a group of related kinds of management work, made up of activities which are closely related to one another and which have characteristics in common derived from the essential nature of the work to be done. Each function can be defined so as to separate it logically from other functions" (4, p. 67). Allen (4) also classified the functions of management into four functions. These functions are management planning, management organizing, management leading, and management controlling. He defines each as follows:

"Management planning is the work a manager performs to predetermine a course of action. Management organizing is the work a manager performs to arrange and relate the work to be done so that it can be performed most effectively by people. Management leading is the work a manager performs to cause people to take effective action. Management controlling is the work a manager performs to assess and regulate work in progress and completed." (4, pp. 68-71).

Furthermore Allen (4) stated that a function is made up of a group of related activities. The activity, according to him, is the basic category of management work; each activity has an essential sameness which distinguishes it from all other activities. Allen (4) classification of management functions and management activities under each function are summarized in Table 1.
<table>
<thead>
<tr>
<th>Function or activity</th>
<th>Name of function or activity</th>
<th>Definition of function or activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function I</td>
<td>Management planning</td>
<td><strong>Management planning</strong>: is the work a manager performs to predetermine a course of action.</td>
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<td></td>
<td>1. Forecasting</td>
<td><strong>Forecasting</strong>: is the work a manager performs to estimate the future.</td>
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<td></td>
<td>2. Establishing objectives</td>
<td><strong>Establishing objectives</strong>: is the work a manager performs to determine the end results to be accomplished.</td>
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<td></td>
<td>3. Programming</td>
<td><strong>Programming</strong>: is the work a manager performs to establish the sequence and priority of action steps to be followed in reaching objectives.</td>
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<td></td>
<td>4. Scheduling</td>
<td><strong>Scheduling</strong>: is the work a manager performs to establish a time sequence for program steps.</td>
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<td></td>
<td>5. Budgeting</td>
<td><strong>Budgeting</strong>: is the work a manager performs to allocate resources necessary to accomplish objectives.</td>
</tr>
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<td></td>
<td>6. Establishing procedures</td>
<td><strong>Establishing procedures</strong>: is the work a manager performs to develop and apply standardized methods of performing specified work.</td>
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<td></td>
<td>7. Developing policies</td>
<td><strong>Developing policies</strong>: is the work a manager performs to interpret standing decisions that apply to repetitive questions and problems of significance to the enterprise as a whole.</td>
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<tr>
<td>Function or activity</td>
<td>Name of function or activity</td>
<td>Definition of function or activity</td>
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<tr>
<td>Function II</td>
<td>Management organizing</td>
<td>Management organizing: is the work a manager performs to arrange and relate the work to be done so that it can be performed most effectively by people.</td>
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<tr>
<td></td>
<td>1. Developing organization structure</td>
<td>Developing organization structure: is the work a manager performs to identify and group the work to be performed.</td>
</tr>
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<td></td>
<td>2. Delegating</td>
<td>Delegating: is the work a manager performs to entrust responsibility and authority to others and to create accountability for results.</td>
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<tr>
<td></td>
<td>3. Establishing relationships</td>
<td>Establishing relationships: is the work a manager performs to create the conditions necessary for mutually cooperative efforts of people.</td>
</tr>
<tr>
<td>Function III</td>
<td>Management leading</td>
<td>Management leading: is the work a manager performs to cause people to take effective action.</td>
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<td></td>
<td>1. Decision making</td>
<td>Decision making: is the work a manager performs to arrive at conclusions and judgments.</td>
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<td></td>
<td>2. Communicating</td>
<td>Communicating: is the work a manager performs to create understanding.</td>
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<tr>
<td>Function or activity</td>
<td>Name of function or activity</td>
<td>Definition of function or activity</td>
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<tr>
<td>3. Motivating</td>
<td>Motivating: is the work a manager performs to inspire, encourage, and impel people to take required action.</td>
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<td>4. Selecting people</td>
<td>Selecting people: is the work a manager performs to choose people for positions in the organization.</td>
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<td>5. Developing people</td>
<td>Developing people: is the work a manager performs to help people improve their knowledge, attitudes, and skills.</td>
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<tr>
<td>Function IV</td>
<td>Management controlling</td>
<td>Management controlling: is the work a manager performs to assess and regulate work in progress and completed.</td>
</tr>
<tr>
<td>1. Establishing</td>
<td>Establishing performance</td>
<td>Establishing performance standards: is the work a manager performs to establish the criteria by which methods and results will be evaluated.</td>
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<td></td>
<td>standards</td>
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<tr>
<td>2. Performance</td>
<td>Performance measuring</td>
<td>Performance measuring: is the work a manager performs to record and report work in progress or completed.</td>
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<td>evaluating</td>
<td>Performance evaluating: is the work a manager does to appraise work in progress and results secured.</td>
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<tr>
<td>4. Performance</td>
<td>Performance correcting</td>
<td>Performance correcting: is the work a manager performs to regulate and improve methods and results.</td>
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<td>correcting</td>
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Koontz (51) classified the functions of management differently. He delineated five functions. He stated, "... it is believed that the most useful method of classifying managerial activities is to group them around the functions of planning, organizing, staffing, directing, and controlling. It is not always possible in practice to divide all managerial activities neatly into these categories, since the functions of managers tend to coalesce; however, this realistic classification is a helpful and essential tool for analysis of functions and the orderly arrangement of principles. **Planning** is the function of selecting the enterprise objectives and the policies, programs, and procedures for achieving them. Planning is, of course, decision making, since it involves choosing among the alternatives. Policies, programs, and procedures encompass the entire enterprise operation. There are, for example, policies relating to authority, prices, and competition; to programs of production, management succession, and internal audit; and to procedures requiring a specific method of handling paper, products, and people. Thus, planning is the rational process of making decisions on any phase of enterprise activity. **Organizing**, the organization function of the manager involves the determination and enumeration of the activities required to achieve the objectives of the enterprise, the grouping of these activities, the assignment of such groups of activities to a department headed by a manager, and the delegation of authority to carry them out. Sometimes all these factors are included in the single term "organization structure"; sometimes they are referred to as "managerial authority relationships." In any case it is the totality of such
activities and authority relationships that comprises the organization function. **Staffing**, the function of staffing comprises those activities that are essential in manning, and in keeping manned, the positions provided for by the organization structure. It thus encompasses the activities of defining the requirements with regard to people for the job to be done, including, among other things, inducements to effective performance; the activities of inventorying, appraising and selecting candidates for positions; and the activities of training or otherwise developing both candidates and incumbents to accomplish their tasks as effectively as possible. **Direction**, the executive function of directing embraces those activities which are related to guiding and supervising subordinates. Although the concept of direction is relatively simple, there is extraordinary complexity in subject matter and methods. It is the duty of the superior manager to inculcate in his subordinates a keen appreciation of the enterprise traditions, history, objectives, and policies. They must learn the organization structure and the inter-departmental relationships of activities and personalities and must become familiar with their duties and the usage of their authority. They must develop the ability to work with, and learn from, others, and, above all, must themselves become effective leaders. **Control**, the control function includes those activities which are designed to compel events to conform to plans. It is thus the measurement and correction of activities of subordinates to assure the accomplishment to plans. This formulation of the concept embraces the idea that planning must precede control and that plans alone are not self-achieving. They must be carried out and possibly modified by circumstance before objectives can be realized.
In the past, control activities have generally related to the measurement of achievement in objective terms" (51, pp. 35-38).

Koontz (51) also discussed the processes of coordination but not as a function of management, rather as the essence of managership for the achievement of harmony of individual effort toward the accomplishment of group goals. Jucius and Schlender (47) definition of functions and classification of functions of management is frequently quoted: "Functions refer to the activities by the performance of which it is proposed to attain desired objectives. Such functions may be divided into three major categories: first, those that are concerned with producing, distributing, financing, etc., goods and services; second, those concerned with planning, organizing, directing, and controlling the first category; and, third, those concerned with procuring, developing, maintaining, and utilizing the human factor. The first category pertains to technical functions and the latter two to managerial and human functions" (47, p. 7). Also "Planning is the managerial function of determining in advance what a group should accomplish and how the goals are to be attained. Organizing is the managerial function of marshalling various factors and resources necessary to carry out plans. It is based upon the managerial function of planning. It precedes the managerial functions of directing and controlling. In a sense, it sets up the machine which will be directed and controlled in carrying out established plans. The 'machine' of organizing has a number of important parts. An organization structure must be established by which various executives and subordinates are tied together into an effective framework. Procedures of
various kinds must be designed and established. Personnel must be hired and trained to staff the structures and procedures. **Directing** is the managerial function of running the organization (or any subdivision) as it actively carries out plans. **Controlling** is the managerial function of restraining and regulating various factors so that projects are completed as planned, organized, and directed. This amounts to seeing that each person does the right thing, at the right time, at the right place, and with the right resources" (47, pp. 47-103). In another breakdown for the functions of management Abshier and Dahle (1) summarize them in five basic functions; these are of planning, organizing, directing, coordinating, and controlling. Abshier and Dahle stated,

"Planning is the thoughtful determination and systematic arrangement of all the factors required to achieve the goals and objectives of the business.

Organizing is the grouping of activities and the fitting together of people in the best possible relationships to get the work done effectively and economically and to help achieve the objectives and goals of the enterprise.

Directing is getting the day to day execution of plans and projects done.

Coordination is the function of management which results in the integration of the activities of people, of the use of facilities and materials, and of the handling of the assets of an enterprise to accomplish a unified approach to a predetermined goal or objective.

Controlling is the function which involves seeing to it that the plan of action is followed according to specifications and scheduled plans and taking remedial action when needed to prevent unsatisfactory results." (1, pp. 13-39)

In a similar fashion Phillips (75) delineated five management functions. These are planning, organizing, directing, coordinating, and
controlling. Phillips (75) stated,

"Managerial planning involves four distinct steps or processes. It involves looking ahead, projecting and appraising developments in anticipation of decisions that will need to be made in the future. It involves the process of decision-making—of deciding what to do. It involves following up the decision by determining how to take the action, and when and where to take it. And planning involves the mapping of control techniques to measure the effectiveness of the decision....

Organizing means grouping processes, assets and personnel, and establishing relationships among them.

...Directing may be thought of as the leadership or coaching function. It is the task of getting things done...

Coordination of the business is essentially the communicative function of management. It requires suitable machinery through which information can flow up through subordinates to all employees, and across among employees at all levels. It requires effective use of this machinery for transmitting information so that subordinates are informed about the objectives, policies and decisions of management, so that management is informed on operations and activities at all levels, and so that each department knows and understands what the others are doing... Controlling is the supervisory function of management to assure satisfactory performance in all phases of operations." (75, pp. 9-10)

Having stated different breakdowns for the functions of management, it is apparent that a survey of all classifications in the literature would be impossible and there is no reason to believe that the mentioned classifications and definitions is not a representative sample of what is available in the literature. From various classifications one might feel that what is important is not the method of organizing the management functions, nor what is contained in each one, but that all writers recognize that the breakdown into functions is of importance rather than a breakdown into operations. A summary of some of the breakdowns of management is given in Table 2. The purpose of presenting the above classifications is not merely to list them, but rather to point out that
Table 2. Some approaches to the delineation of management functions

<table>
<thead>
<tr>
<th>Allen (4)</th>
<th>Koontz (51)</th>
<th>Jucius and Schlender&lt;sup&gt;a&lt;/sup&gt; (47)</th>
<th>Abshier and Dahle (1)</th>
<th>Phillips&lt;sup&gt;b&lt;/sup&gt; (75)</th>
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<tr>
<td>Management planning</td>
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<td>Management leading</td>
<td>Management staffing</td>
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<td>Management controlling</td>
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<td>Management directing</td>
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4 functions 5 functions 4 functions 5 functions 5 functions

<sup>a</sup>The above is the second category of his overall classification.

<sup>b</sup>The above is his (1962) classification.
underlying these functions are principles and methods which will help
in better understanding the notion of management functions and in
developing a classification to serve in the study of management behavior
and its typology.

For the purpose of this study five management functions have been
delineated. The delineated functions will be used as definitions of
what is expected of the manager in his position at the farmer coopera-
tive. These functions are as follows:

1. General planning and decision making.
2. Organizing and staffing.
3. Directing and leading.
4. Coordinating and communication.
5. Controlling.

Each of the above functions will be defined and activities under each
will be specified.

General planning and decision making General planning and decision
making is the thinking, judging and deciding aspects of the manager's
job. Planning is, therefore, the thinking process that should be carried
on before any action is taken. Furthermore planning is projecting and
appraising developments in anticipation of decisions that will need to
be made in the future. It starts with the ideals and objectives of the
business, predetermines what shall be done, why it should be done, and
how and by whom it shall be done in order to attain the desired goals
and objectives of the business, and completes its course with the pro-
viding of controls that will tell management how well they are doing and
where they need to replan. Planning is always done with a goal in mind.
Planning involves decision making and choosing from among alternative courses of action. The activities of general planning and decision making are as follows:

1. Establishes goals so that everybody can know what the business hopes to achieve.
2. Establishes the sequence and priority of action steps to be followed in reaching objectives.
3. Establishes coordinated job descriptions so that each job will be coordinated with others, does not duplicate others, nor leave any duties undone.
4. Establishes the necessary facilities so that the assigned job functions can be performed efficiently and economically.
5. Establishes the standards of control so that as work progresses the results can be compared with the standards as a check of performance.

Thus, the function of planning runs all the way from defining the over-all firm or association objectives and goals to the planning of work programs, both long and short range. It includes the formulation of policies that provide guides to specific decisions so that they are consistent without the necessity of constant clearance with superiors.

Organizing and staffing. Organizing and staffing is the work a manager does to arrange and relate the work to be performed so that it can be carried out most effectively by personnel. In other words it is the grouping of activities and the fitting together of people in the best possible relationships to get the work done effectively and economically.
and to help achieve the objectives and goals of the enterprise. An organization is not people but the mechanism arranged to enable people to work most effectively together. An organization chart is helpful in showing some aspects of the organization but the chart itself is not the organization. The activities and/or items of organizing and staffing are as follows:

1. Developing organization structure by identifying and grouping the work to be performed.
2. Establishing structural relationships to create the conditions necessary for mutually cooperative efforts of people.
3. Responsibility by assigning work to various positions.
4. Authority by distributing power and assigning rights to various positions.
5. Accountability—the obligation to perform responsibility and exercise authority in terms of established performance standards.
6. Preparing, writing, and revising job descriptions.
7. Selection and hiring of personnel.

There are several implications of this concept of organization. In the first place, the one-man business cannot possibly be organized. Since the owner or operator himself performs the sole managerial functions of planning and controlling, he delegates no authority to others. Let him, however, split off the buying activities, delegate them to a subordinate and provide coordination of activity between the buyer and himself, and the enterprise will have become organized. An organized
enterprise requires at least two managers on the same level or in a superior-subordinate relationship.

A second implication is that all managers, when they decide to organize an enterprise or a department of any undertaking, proceed in the same way. Whether he be president, sales manager, controller, or office manager, each will group the activities for which he is responsible, assign some of them to subordinates, delegating to them the requisite authority, and provide for the coordination of their authorities.

The organization structure is not an end in itself but a tool for accomplishing enterprise objectives. Efficient organization will contribute to the success of the firm or the association, and for this reason the application of organization principles is very important. The organization must fit the task and must reflect the policies imposed on the manager.

Directing and leading Directing and leading embraces those activities which are related to guiding and supervising subordinates. It also includes the time spent, on the part of the manager, in the training, evaluation, motivation or disciplining of employees. This includes any interpretation or clarification of policies or directives and anything the manager does to affect the morale, loyalty, or harmonious cooperation of the employees. Thus one might say that direction and leading is intimately concerned with getting things done. One can plan, organize, but nothing is accomplished until subordinates are taught what to do. The difference between all other management functions and direction is comparable to the difference between sitting in an automobile
with the motor idling and putting the car into gear.

A good working definition of direction is the management function of guiding and overseeing subordinates. The point of view implied in this concept has several advantages. First, businessmen will understand it because they tend to look upon direction and leading in this way. Secondly, the activity of guiding subordinates emphasizes appropriately the great importance of the manager's teaching function. Probably more than he realizes, the manager and/or the executive is a teacher. "It is as important for us to be effective teachers as it is for the members of any college faculty" (33, p. 84). The manager has to explain to subordinates, describe, illustrate, and correct their mistakes. He has to assign tasks and command their accomplishment and must guide subordinates in their efforts to develop teamwork. Thirdly, direction and leading is in its every aspect a function of the superior. Finally, every manager who has at least one subordinate is engaged in the directive and leading function.

Managers direct and lead subordinates because it is through subordinates that work assignments are done.

**Coordination and communication** Coordination and communication is the function of management which results in the integration of the activities of people, of the use of facilities and materials, and of the handling of the assets of an enterprise to accomplish a unified approach to predetermined goals or objectives. In other words it is the role of the manager to insure the effective operation of the firm or the association (e.g., the cooperative association) in terms of integration, timing, and balance. This includes all time spent communicating and insuring
that effective communication is taking place between all people and
departments in the firm or the association.

**Controlling** The managerial function of control is the measure­
ment and correction of the performance of subordinates in order to make
sure that enterprise objectives and the plans devised to attain them are
accomplished. This includes the evaluation of reports, data, plans,
departments, performance, as well as the entire operation in relation
to the goals, policies, and standards of the firm or the association (e.
g., the cooperative association).

Moreover, a moment’s reflection will confirm that a manager cannot
control the past. Although he may effectively study past actions to see
where and how they deviated from plans, his purpose in doing so is to
ascertain what happened and why and to take steps to avoid recurrence of
unwanted experience in plans in the future. Control, like planning, is
ideally forward looking, and the best kind of managerial control corrects
possible deviations from plans before they occur. The next best method
is to detect them as they are occurring. Just as the navigator con­
tinually takes readings to ascertain where he is relative to a planned
course, so should the business manager continually take readings to assure
himself that his enterprise or department is on course, and, if it is
off course, revise plans to return his unit to the intended course. In
fact, it is the function of control to make the intended occur.

The control process, wherever it is found and whatever is controlled,
involves three steps: (1) the establishment of standards; (2) the
appraisal of experienced or expected performance against these standards;
and (3) the correction of deviations.
Establishment of standards. Strictly speaking, standards are established criteria against which actual results can be measured. They represent the expression of planning goals of the enterprise or the department in such terms that the actual accomplishment of assigned duties can be measured against these goals. Standards consequently may be physical, in the sense that they represent quantities of products, units of service, man-hours, speed, volume of rejections, and many other items of physical measurement. Standards may also be stated in monetary terms, costs, revenues, or investments.

Appraisal of performance. The second step in control is to appraise the actual or expected performance of persons concerned by comparing it to the standard. If the standard is appropriately drawn and if means are available for determining exactly what those charged with a certain task are doing, appraisal is fairly easy. But there are many activities in which it is extremely difficult to develop sound standards, and there are many that are hard to measure. It may be quite simple, especially with present techniques of time and motion study, to establish man-hour standards for the production of a mass-produced item, and it may be equally simple to appraise actual performance against these standards, since the item produced and the manner of its manufacture may be subject to accurate measurement. On the other hand, if the article is custom-made or is produced with special requirements, the appraisal of performance may be a formidable task. Furthermore, in the less technical kinds of work, not only may standards be difficult to develop but appraisal may also be exceedingly difficult.

Correction of deviations. The third step in control is to correct
deviations. If standards are drawn so that they reflect organization and if performance is measured and appraised in these terms, the correction of deviations is clearly expedited, since the manager then knows exactly where, in the sense of individual or group assignments of duties, the corrective measures must be applied.

One of the most widely used devices for effecting managerial control is the budget. Indeed, it has sometimes been assumed that budgeting is the device for accomplishing control. But, as previously stated, there are many nonbudgetary devices that are also essential. In fact, many companies attain a high degree of control without formal budgets, although effective control is seldom accomplished without utilizing the principles of budgeting. Budgeting is defined here as the formulation of plans for a given period in the future in specific numerical terms. As such, budgets are statements of anticipated results. They may be stated in financial terms, as is the case with the expense and revenue and capital budgets, or they may be stated in nonfinancial terms, as is found in the instances of budgets of direct-labor-hours, materials, physical sales volume, or units of production.

From the numerical statement of plans and the breaking of these plans into components consistent with the organization structure, budgets furnish a device for correlated planning and a means whereby authority may be broadly delegated without loss of control. In other words, the very process of reducing plans to definite numbers forces a kind of orderliness that might not otherwise occur, thus this process gives the manager the ability to see more clearly what capital will be spent by whom and where, for what revenue, or what units of physical input or
output. Through forcing this kind of orderly definiteness, the manager can then better see how a plan will work out and, having ascertained this, can more freely delegate authority to subordinates to effectuate the plan so long as they are limited to the requirements of the budget.

It is sometimes forgotten that budgets serve purposes beyond that of control. A budget not only requires considered planning but is an instrument of planning in the first place. Moreover, a budget, to be useful to a manager at any level, must reflect the organizational pattern by breaking down the elements of plans into their organizational components. Only when plans are so complete, so well coordinated, and so well developed that they can be fitted into departmental operations can a useful departmental budget of any kind be prepared. Then, if it is well prepared, the budget becomes an effective instrument of control, since the terms of the budget become the standards against which actual or expected performance is measured.

Typology of Management Behavior

Having defined the five functions of management and specifying various activities under each, the discussion will turn now to the manager's actual behavior or performance. The previously stated definitions of the delineated functions of management present ideal types of management behavior or manager's role expectations. It is the purpose of this thesis, as previously stated, to study management behavior as it is actually performed. In this case what the manager is doing rather than what he should do. It is the belief of the author that the manager performance on each function of management present a different, and
probably, a unique type of management behavior. Thus the manager performance, or his actual behavior, on each of the management functions as previously delineated will refer to as typology of management behavior. Before further illustration some assumptions and/or premises pertaining in general to the concept of management and in particular to the notion of typology of management behavior will be stated. These assumptions and/or premises are as follows:

1. Management is a special kind of work. One might identify management as a kind of work a manager performs to enable people to work most effectively together. A manager does not perform technical, commercial, financial, security, accounting, and managerial activities, but rather, he manages technical, commercial, and other specialized functions of the business.

2. Management work can be classified. One could analyze and classify management work into five management functions and several management activities, each of which is a separable and identifiable kind of work.

3. Management must be learned. Managing is not instinctive or intuitive; in fact, it is often directly opposed to the spontaneous, natural mode of action. One does not manage naturally. Managing involves skills that must be learned in terms of logical, verifiable concepts, principles, and techniques.

4. Management work is measurable. One can determine how much of this work should be performed in any given
position and whether the predetermined amount is
being carried out effectively. This is an important
consideration. If a manager can measure his work, he
can also control it. Furthermore, he can tell where
he is strong and where he is weak in his performance,
and what steps he should take to improve himself.

5. Management skills are transferable. A manager who
masters the skills involved in general planning and
decision making, organizing and staffing, directing and
leading, coordinating and communication, and controlling
can apply these skills effectively in the management of
different kinds of specialized functions. Provided he
he has the proper background of functional knowledge in
each case, with appropriate preparation, he can transfer
his managing skills to management of manufacturing, engineering,
marketing, finance, research, or other functions. The
more expert a manager is in management skills and the
higher his organizational position, the more easily he can
do this.

Keeping in mind the definitions of the delineated five functions of
management and the above stated assumptions, it is derived that the
manager actual behavior or performance of the activities pertaining to
each function will present five types of management behavior. First,
the manager's actual behavior on the activities of general planning and
decision making function will be called, hereinafter, management general
planning and decision making behavior. Second, the manager's actual
performance on the activities of organizing and staffing function will be called management organizing and staffing behavior. Third, similarly, the manager's actual behavior on the activities of the directing and leading function will be called management directing and leading behavior. Fourth, the manager's actual behavior on the activities of the coordinating and communication function will be called management coordinating and communication behavior. Fifth, and finally, the manager's actual behavior on the activities of controlling will be called management controlling behavior. A summary of the delineated functions of management and the behavioral types pertaining to them are presented in Table 3.

Table 3. Summary of the delineated functions of management and typology of management behavior

<table>
<thead>
<tr>
<th>The delineated management functions</th>
<th>Typology of management behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General planning and decision making</td>
<td>Management general planning and decision making behavior</td>
</tr>
<tr>
<td>II. Organizing and staffing</td>
<td>Management organizing and staffing behavior</td>
</tr>
<tr>
<td>III. Directing and leading</td>
<td>Management directing and leading behavior</td>
</tr>
<tr>
<td>IV. Coordinating and communication</td>
<td>Management coordinating and communication behavior</td>
</tr>
<tr>
<td>V. Controlling</td>
<td>Management controlling behavior</td>
</tr>
</tbody>
</table>

a The delineated management functions are intended to be on the operational management level as previously illustrated.

b It is meant by typology of management behavior the type of actual behavior performed by the manager on each of the five functions of management.
Having discussed human behavior and management behavior theoretically the discussion will turn now to those individual personal variables and situational variables and conditions which have been assumed in the developed analytical model, as previously stated, to be related to human behavior. The discussion here will be focused on the theoretical ground on which this assumption stands. The individual personal variables, namely the individual attitudes, knowledge, and job satisfaction, will be presented first each as a separate dimension affecting human behavior. Following the presentation of the individual personal variables the situational variables and/or conditions will be presented and discussed in similar steps.

Attitudes

Definitions

The definitions of attitudes range all the way from defining them as types of behavior to psychological components of personality. The definitions of attitudes as behavior seem only to take into account superficial aspects of the concept. Therefore it appears relevant to examine the psychological definitions more closely.

The development of the concept attitudes seems to have come about as a result of a search for initial assumptions governing human behavior. For many years this search was governed by lengthy discussions and enumerations of human "instincts." However, these instincts were completely individualistic in their origin and not social. Thus the basis for a truly social science could not be found in them. W. I. Thomas was one of the first to introduce his concepts of values and attitudes in
the 1920's, but the change in assumptions from the individual to the 
social was not really apparent at this time.

Znaniecki, as cited in Young (99), in his *Laws of Social Psychology*, 
1925, stated that he preferred a different terminology,

"...but revealed plainly that the acts and experiences 
are the determining antecedents beyond which it was not 
profitable or even possible to seek any stable elements 
or absolutes." (99, p. 4)

When *Human Nature and Conduct* by John Dewey was first published in 
1922, it contained one of the first clear statements of the social founda­
tions of human behavior. It elucidated the relationship between cultural 
forms and institutions and the habits of individuals. Dewey stated, 

as cited in Young (99),

"The instincts do not make the institutions: it 
is the institutions that make the instincts." 
(99, p. 5)

Krech *et al.* (52) defined attitude as an enduring system of positive 
or negative evaluations, emotional feelings, and pro or con action 
tendencies with respect to a social object.

For Bernard, as cited in Young (99), an attitude is an incomelated 
or suspended or inhibited act. It is a definite phase of behavior.

The individual is born with some behavior patterns, whatever they 
may be called or from whatever source they may have come, the genes or 
the environment. These develop under the stimulus of the environment and 
as a result of the necessity of making an adjustment to the conditions 
of survival. Immediately after birth many behavior patterns begin to be 
integrated, and this process of behavior integration goes on throughout 
life, although it is at its maximum in childhood and youth, and diminishes
somewhat in middle life and rapidly in old age.

La Piere and Farnsworth (55) explain the meaning of the term attitude as follows:

"The term attitude implies a special way of looking at habits—the acquired patterns of adjustment. The attitude is a latent adjustment pattern toward some specific situation—i.e., it is the preparation, perhaps incomplete, of the individual to adjust to a specific situation in a given way." (55, p. 221)

Allport, as cited in Klineberg (50), gives the following definition:

"An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." (50, p. 347)

Several features of this definition may be noted.

First, an attitude is a "state of readiness" of the individual to deal with an object or type of objects. It is a matter of common observation that, in the course of an ordinary day, any individual seeks and utilizes, or avoids and rejects, objects of many kinds in fulfilling his needs and satisfying his wishes; he is prepared to deal with these objects as they are encountered. He knows how to use them, how to relate them to himself in order to make them contribute to, or to keep them from interfering with, the carrying on of whatever activity in which he may be engaged from moment to moment.

Secondly, Allport's definition embodies the general conclusion of students of behavior that, aside from a very few non-discriminating incipient reflexes, perception of objects and readiness to respond to them in an organized manner develops through experience. Furthermore, even though states of readiness, when once organized, tend to become
stable and thus to impose patterns of consistency on the behavior of the individual through time, any state of readiness to respond in a certain way to an object does or may undergo modification in the course of each successive actual response. Thus, the attitude is a product of experience, but it enters into subsequent experience as a directive factor.

A third element in Allport's definition is anticipated in what has just been said—the attitude exerts a directive or dynamic influence upon the individual's response to an object or situation. The conception of an attitude as a predisposition or readiness for response may imply that it is a passive entity which comes into play only when its object is actually present. However, there is ample evidence that attitudes are dynamic, that they can lead the individual to seek the objects. As Allport suggests, an attitude is an organizing principle operative continuously throughout an act from its beginning to its consummation; it may become active because of tensions arising within the individual in the physical absence of the objects to which it relates and thus it initiates an act. In any case, attitudes help in the selection and reject objects or stimuli that are appropriate to the act's completion and evaluate, or provide a referential basis for evaluating, the process of the act in terms of its prospective success or failure and, hence, lead to modification of the act while it is in progress.

Although the social scientists reviewed above have defined attitudes in somewhat different ways, there are certain common elements in the definitions. The common element in the concept of attitudes is its connotation a neuropsychic state of readiness for mental and physical activity; that is to say, the presence of an attitude prepares the
individual for a certain response to objects and situations with which it is related.

In this thesis attitude is defined as a predisposition to act. It is the state of readiness of an individual to deal with an object. Attitudes arise from the effects of personal experience and the pressures of personal need.

In order to demonstrate the relationship between attitudes and human behavior with more emphasis on management behavior the systems of attitudes have to be analyzed to interlate them to human behavior and in turn to management behavior.

Attitude as a system

Man acts upon his ideas. His irrational acts no less than his rational acts are guided by what he feels, what he believes, what he anticipates. However bizarre the behavior of men, tribes, or nations may appear to an outsider, to the man, to the tribes, to the nations their behavior makes sense in terms of their own world views. Every man, through cognitive mapping, attempts to construct for himself his own meaningful world, and he classifies and orders within it a multitude of objects, among which the most significant are other people. As Sir Frederick Bartlett suggested.

"It is fitting to speak of every human cognitive reaction--perceiving imagining, thinking, and reasoning--as an effort after meaning." (52, p. 17)

If one understands how man comes by ideas about things and people who make up his world image, if one understands the principles which govern the growth and development and interaction of these ideas, one
will have taken the first step toward understanding man's behavior in this world of his own making.

As man in his finite world is repeatedly forced to cope with the same object the repeatedly evoked cognitions, feelings, and response dispositions become organized into a unified and enduring system—for man is an organizing and conserving animal. This entire package of particular beliefs, feelings, and response tendencies is henceforth there, whenever the individual is confronted by the relevant object. In other words, he now has an attitude toward the object. As the individual acquires more and more attitudes—as he assimilates more and more objects in his world—his improvisations toward these objects and his fresh examinations and interpretations of them decrease. His actions become relatively stereotyped, predictable, and consistent—and social life becomes possible. For where there are no enduring beliefs, evaluations, and action tendencies which can be shared by the company of men, social life as we know it would be impossible (52).

According to Krech et al. (52) the social actions of the individual reflect his attitudes—enduring systems of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to social objects.

As the individual develops, his cognitions, feelings, and action tendencies with respect to the various objects in his world become organized into enduring systems called attitudes.

Krech (52) in his definition of attitudes as systems, put emphasis on the interrelatedness of the three attitude components. When incorporated in a system, these components become mutually interdependent. The
cognitions of an individual about an object are influenced by his feelings and action tendencies toward that object. And a change in his cognitions about the object will tend to produce changes in his feelings and action tendencies toward it.

Cognitive The cognitive component of an attitude consists of the beliefs of the individual about the object (52). The object of an attitude may be anything that exists for the individual. Thus an individual has a vast array of attitudes toward objects in the physical world that surrounds him whatever it is. He has perhaps an even more imposing array of attitudes toward objects in the social world in which he lives. He has attitudes toward other people and groups of people, toward social organizations, and toward political and economic events. The most critical cognitions incorporated in the attitude system are evaluative beliefs which involve the attribution of favorable or unfavorable, desirable or undesirable, good and bad qualities to the object.

Feeling The feeling component of an attitude refers to the emotions connected with the object (52). The object is felt to be pleasing or displeasing; it is liked or it is disliked. It is this emotional loading which gives attitudes their insistent, stirred-up, motivating character.

Action tendency The action tendency component of an attitude includes all the behavioral readinesses associated with the attitude. If an individual holds a positive attitude toward a given object, he will be disposed to help or reward or support the object; if he holds a negative attitude, he will be disposed to harm or punish or destroy the object.
Throughout the above presentation the components of an attitude are assumed to be related to behavior, it follows logically that attitudes themselves should therefore bear a relationship to behavior. Since management behavior is one type of human behavior; it is derived that attitudes are assumed to be related to management behavior. Thus, attitudes would be expected to influence individual's behavior in general and his management behavior and its types in particular.

Knowledge

Definition

An individual's knowledge is defined as the information which helps him to set a context for the social phenomena to be more easily comprehended. In other words knowledge means possessing or being the possessor of information about anything.

The concept knowledge, possesses a wide and diversified range of definitions and interpretations. In spite of the difficulties in generating meaningful conceptualization(s) to provide definite, discrete categories for operationalization it is believed that knowledge represents a significant aspect or portion of the factor(s) that influence human behavior and action. In general, specific definitions and interpretations for the concept are subject largely to the individual context within which the concept is used. For example in learning theory, the relationship of knowledge to attitude and performance is explained by the stimulus-response-reward schema. Other aspects of learning theory suggest that attitudes, knowledge, and performance activities can be taught, and thereby acquired by the individual. This position presents
one theoretical relationship assumed in the learning process. Selecting some of the general level components of human behavior. McGehee and Thayer (61b) state:

"...attitudes, as are other forms of behavior, are acquired as a function of experience, they are learned. This means that in attempting to develop or modify attitudes in an industrial situation we are confronted with the same type of problem we meet when we try to teach an employee a skill or impart knowledge." (61b, pp. 169-170)

It is assumed therefore, that there exists a direct interaction between attitudes and knowledge, and specifically that attitudes influence the knowledge which is acquired by the individual and that knowledge leads to attitude reinforcement, change or dissonance. It is assumed there exists a relationship between attitude and knowledge in reference to performance. A circularity is in evidence here, as performance is a result of knowledge and attitude, and attitude and knowledge are affected by the individual action taken.

It is assumed that the "correctness" or "incorrectness" of the knowledge, used by the acting individual has a direct bearing on the course of action chosen. It is assumed that, in general, the greater the amount of "correct knowledge," possessed by the acting individual about the subject under evaluation, the greater will be the opportunity of the individual actor to accurately evaluate the situation, choose from among the perceived alternatives, and initiate what to the individual appears to be the most rewarding course of action. Some leading sociologists such as Drs. George M. Beal and Joe M. Bohlen further elucidate the relationship of knowledge to individual behavior by taking the position that knowledge as perceived through the eyes of the individual actor is
represented by, "...the relationship that (the actor believes) exists between phenomena" (12, p. 293). The above given quotation discloses that interpretation is intimately tied to the patterns of cause and effect, that, to the individual actor, are perceived as being interconnected. Knowledge, that is limited, incorrectly associated, or in any other manner defective, may still be construed by the individual actor as disclosing a relationship that establishes a rationale upon which the individual initiates action. Such spurious associations may limit, misdirect, or in other ways orient the individual to action/behavior decisions deemed inappropriate by others with a greater amount of knowledge, or who view the action/behavior of the individual from another frame of reference. This point is highly relevant in the study of human behavior and is especially significant in the conceptualization used in this dissertation.

Much behavior research, including this dissertation takes a normative position in relation to the individual's constructed world of relationships between phenomena. The researcher uses some normative criterion in order to establish a more general and accepted relationship between phenomena. This normative criterion is usually relationships determined on the basis of the scientific method. Through the use of the scientific method, knowledge of an individual is not described or measured in terms of relationships between phenomena constructed by the individual, but represents the degree to which the individual's constructed relationships agree or disagree with relationships supported by scientific inquiry in reference to the phenomena under investigation.

Throughout the above presentation beliefs (knowledge) are assumed
to be related to human behavior. Since management behavior is one type of human behavior, it follows that individual's knowledge is assumed to be related to his management behavior.

Furthermore, the individual must have knowledge to act in relation to both ends and means. Also the individual's knowledge level determines his rational action.

It is concluded, therefore, that beliefs (knowledge) are assumed to be related to human behavior and in turn to management behavior.

Job Satisfaction

The last individual personal variable in the present study is individual satisfaction (e.g., job satisfaction).

Definition

The term "satisfaction" refers to the state of mind of a person, to some processes going on within him. It relates to an individual, not to a group (101).

It is assumed that the state of mind of a person is subject to the affect, if it is not partially a product, of his beliefs and attitudes. Thus one might derive that individual's beliefs and attitudes are related to his state of satisfaction.

Satisfaction emerges from an individual's feelings and thoughts, which may be related to the rewards he is receiving from his environment. His response to his reward condition will result not only from the rewards themselves, but also from his wants and his perceptions of what other persons are receiving from the same sources.

One should expect to find some relationship between a person's
behavior and his internal state of satisfaction. But feelings and be­
behavior are not the same thing. Motivation in terms of needs, desires,
wants, preferences, or expectations, explains behavior. In a sense, satis­
faction does not.

Satisfaction may be viewed as an individual's emotional measure of the balance he is experiencing between what he wants and what he is receiving from his environment. He wants certain rewards and not others in specific situations. The more he gets of what he wants, the more satisfied he will probably be, but this says nothing about his behavior. His behavior, one might assume, is directed by his wants.

The term "wants" refers to inner motivational conditions. Krech et al. (52) define wants as follows:

"(wants is) The initiating and sustaining forces of behavior. Wants may be either positive or negative. A positive want (e.g., a desire) is an assumed force which impels a person toward the achievement of a goal. A negative want (e.g., anxiety) is a force which repels a person from certain objects or conditions. Common synonyms for positive wants are drives, needs; for negative wants, fears, aversions." (52, p. 102)

As to relationships between productivity and satisfaction, if a person wants the rewards that he can get by turning out production and his only criteria for rewards is amount produced, the more he produces the more he gets, and the more satisfied he will be. On the other hand, if he wants other kinds of rewards, his satisfaction will stem from his receipt of those rewards, not only from his productivity rate. Under this condition a high producer can be satisfied, not with his production, but with the other rewards he receives. Similarly, a high producer can be dissatisfied with his rewards.
Negative wants, or avoidances, also play an important part in understanding the relationships between satisfaction and other variables. A simple explanation of the negative correlations between satisfaction and productivity holds that productive work is perceived by some people in some situations as a form of punishment. It is undertaken to avoid more severe punishments. An extreme example would be the slave crews of ancient Mediterranean galleys. They would work hard to avoid the lash of the master, but would hardly be expected to be satisfied with their lot. Not working hard would result in severe punishment—painful wounds, disability, or death. These were usually even less desirable than painful physical labor.

The next step is to consider the kinds of rewards that people might be seeking in the organizational environment, and the kinds of rewards that the environment can deliver, as well as some of the objects of negative wants which may be present. A number of researchers distinguished between external and internal rewards; the rewards that come from the formal organization and those that derive from group membership.

External rewards include those related to economic security: pay, job security, and economic fringe benefits. Another kind of external rewards are those rewards intrinsic to the person's job: interest, variety, and the opportunity to develop mastery over intricate problems. Status rewards are still another kind of reward conferred by an organization. These include all of those symbols that publicly communicate the importance of the position. They cover such symbols as the amount of pay received above economic survival requisites; the form in which one is paid (monthly salary as against hourly wages); one's title, work place
location, and furnishings; and one's working hours. The promise of future advancement, which involves both specific job content and status connotations, is also an external reward.

Internal rewards, in contrast, are those that are distributed among members of the work group through interpersonal relationships. These include liking and friendship, esteem and respect, support and help, and the opportunity to perform socially important and personally gratifying roles. In many work groups, the internal and the external reward systems are in conflict with each other. In these instances, the individual is forced to choose one type of reward at the expense of the other.

The organizational situation can provide various kinds of rewards for the individual. Conversely, individuals bring a variety of wants with them into the organizational setting. Individuals differ in their wants. Any one individual's wants may vary from time to time as his organizational and nonorganizational roles change over his lifetime. Some wants may become so fully satiated that they no longer motivate. The individual may have a difficult task in trying to understand his own wants at a particular time, and in trying to discover his own particular order of preference. He may have an even more difficult task trying to understand the changes in his motivations. And yet it is all too common for this same individual to impute his own wants to others, and to try to influence their behaviors by rewards and punishments that might be important to himself, but bear little relationship to their actual wants. This means that without an understanding of individual motivation, the administration of rewards and punishments to others will yield
unpredictable and unexpected results.

Analysis of individual motivation involves two major problems. The first is that of conceptualization and measurement. The second concerns the limits to the pursuit of causes.

A variety of conceptualizations have been developed by various theoreticians and researchers. These include the ideas of instincts, drives, needs, motives, wants, values, interests, goals, objectives, and others (101). One important distinction among these ideas is made between conscious and unconscious motives. Conscious motives are those wants that are known to the individual. They become part of his conscious reasoning scheme, his personal basis for rational, goal-directed behavior. He can explain why he does certain things by his conscious wants. But he cannot explain all of his relatively persistent behaviors in the same way. He and others may "explain" some of his behaviors as basic character traits or as part of his unique version of "human nature."

The explanation of these recurring behavior patterns, whether they involve purely private expressions or interpersonal communications, lies in unconscious motivation. Freud is credited with the discovery and elaboration of this concept. The causes of these behaviors lie in intrapsychic processes which take place within the person even though he may be unaware of them. The boundary line between the unconscious and the conscious is guarded by mechanisms of defense, which themselves become important motivating elements. One strong negative want is the anxiety related to uncovering the unconscious. Hence, unconscious motives affect behavior in two ways; they push the individual toward or away from external objects and through the mechanisms of defense protect him by
generating defensive behaviors.

Some ideas concerning motivation refer to internal states, or sources of internal energy or "push." Other ideas refer to external objects or goals. These goals tend to "pull" the person or "repel" him, from outside. Yet some uniformities stand out when comparing empirical analysis of motivation. One is the multiplicity of motives—the idea that the individual is motivated by many internal and external sources at the same time. Another is that some kinds of motives remain relatively constant as an individual moves from one situation to another. Other kinds of motives, aroused by the situation, may vary within an individual as he moves from situation to situation. Still other kinds of motivation change within the individual over longer periods of time as he moves through his life cycle.

The second major problem in understanding motivation involves the limits acceptable in pursuing causes. One such limit, acceptable for some purposes, sees motivation as a "given," independent variable. For other purposes, motivation is regarded as a dependent variable, whose sources one seeks. In the first instance, one seeks only to determine the relationship between motivation and behavior. In the second instance, one seeks to determine the relationships between past experiences and current motivational states. Instead of taking motivation as given, one now asks why the person has the particular motives that determine his behavior in specific situations. In this kind of investigation, one looks at the individual's past experiences for the causes of his current motivational state.

If one considers the individual's life through his sequence of wants,
some biologically based, others derived from cultural experiences, one can trace patterns of reward and deprivation emanating from his environment. One can analyze these rewards and deprivations as learning experiences, from the point of view of behavioral reinforcement. That is, any behavior followed by a reward which satisfies an active want is \textit{learned} as an appropriate way in which to satisfy the want henceforth. Similarly, behaviors that are followed by deprivation of wants will tend to be avoided. Furthermore, under some conditions, rewards may lead to satiation of certain wants; in such cases the satisfied want no longer motivates the individual's behavior. Under other conditions, success feeds on itself. The individual continues to pursue easily available rewards. In addition, the individual's internal states of wanting, feeling, and thinking become modified by reward and deprivation. Not only is behavior learned by reinforcement, but so are the internal conditions which accompany the behavior patterns as parts of the total personality.

Put another way, the individual learns to have attitudes and feelings. He learns to expect certain rewards from the environment in return for certain behaviors. He acquires levels of aspiration in relation to certain kinds of rewards. He may learn, for example, that it does not pay to pursue friendship or trust people too much because he has been disappointed in the past when he sought friendship, trusted people, or both. On the other hand, he may have learned that trust pays off. Another possibility is that along with reinforcement of attitudes toward particular rewards, the individual acquires a differential order of preference for various kinds of rewards.
From his past history of environmental rewards and deprivations, the individual enters the work situation wanting some kinds of rewards from it and not being concerned about other rewards. The situation provides opportunities for satisfying some of his wants but not others. It may provide opportunities for satisfying many of his wants, but the constraints may force him to choose to pursue one kind of reward at the expense of another kind. This scheme is represented by Figure 3.

The individual's level of satisfaction is a function of his receipts of rewards from the situation and the wants which he brings to it. Holding wants constant, the more he receives, the more satisfied he becomes. Holding receipts constant, the more he wants, the less satisfied he becomes. In mathematical form, satisfaction $^* = f\left(\frac{\text{Rewards}}{\text{wants}}\right)$. What the individual wants from the situation is determined by his personal history of rewards and deprivations, in a manner too complex to attempt to formulate in a simple equation. What he receives from the situation is a function of his behavior and the behavior of the other persons in his environment, as constrained by the organizational and cultural systems. Once involved in the situation, the individual's wants become modified further in the process of being rewarded and deprived; experiences in the organizational setting become part of the individual's personal history.

The differentiation between external and internal rewards is shown:

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*This equation is given by Abraham Zaleznik and David Mowen (101).
The organizational situation as a source of

<table>
<thead>
<tr>
<th>External rewards</th>
<th>Internal rewards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money</td>
<td>Liking</td>
</tr>
<tr>
<td>Status</td>
<td>Friendship</td>
</tr>
<tr>
<td>Job interest</td>
<td>Help</td>
</tr>
<tr>
<td>Advancement</td>
<td>Emotional support</td>
</tr>
</tbody>
</table>

Rewards from the organization

Performance for the organization

Behavior in the work group

Individual wants

Past experiences; rewards; deprivations

Figure 3. Sources of satisfaction in work groups
in Figure 3. Depending on the nature of the organizational constraints and the state of work group development, the presence of alternative sources of rewards may put the individual in a position of conflict, forcing him to choose one kind of reward at the expense of the other. One would suggest that the greater the degree of conflict, the more the individual is forced to compartmentalize his experiences; for example, he might be forced to feel that he likes the job but not the people, or likes the people but not the company, or likes his boss but not his work associates, and so on. Since this condition is not uncommon in organizations, researchers have attempted to measure satisfaction along the specific, compartmentalized scales. Since individual wants are many and varied, both in kind and in intensity, and the opportunities for rewards make up a complex pattern, the theoretical question of what is meant by satisfaction and how it is determined can be approached in only the most general of terms. However, the type of satisfaction which is of major concern in this thesis is the manager job satisfaction.

From the above presentation and discussion it appears that one might assume that there is a relationship between human behavior and satisfaction. Since management behavior is one type of human behavior, therefore, it is assumed that the manager's job satisfaction is related to his management behavior.

Situational Variables

Situational variables is an important group or cluster of variables which assumed to affect the individual's behavior or action. This section is devoted to the theoretical discussion of various approaches
to the definition of the situation conceptualization from which the expected relationships between the situational variables and human behavior in particular will be derived.

**Definition of the situation**

It was Weber's contention that the social sciences were concerned with the understanding, as distinct from simple behavioristic reporting, of human action, and that an essential element of the interpretation of human action was the effort to seize upon the subjectively intended meaning of the participants in it. At roughly the same time W. I. Thomas (1863-1947), one of the fathers of American sociology, advanced the theorem that it is essential in the study of man to find out how men define situations in which they find themselves and that if men define situations as real, they are real in their consequences.

What Weber and Thomas set forth has by now become one of the axioms of sociological research. Stimulated by recent developments in Freudian and non-Freudian social psychology as well as by the trends outlined above, one has come to recognize the fact that men respond to outside stimuli in a selective manner and that such selection is powerfully influenced by the manner in which they define or interpret situations. Anticipatory definitions are likely to have enduring social consequences, even if these definitions seem to an outside observer to be completely devoid of an "objective" truth value.

But sociological, as distinct from psychological, analysis of definitions of situations does not rest its case with the study of individual meaning; it attempts to show that intersubjective understanding requires
the acquisition of shared meanings. In their analysis of the functions of cultural norms in the rise of group structures, sociologists and anthropologists have emphasized that one of the essential functions of cultural norms is to provide members of a group or society with those shared definitions of the situation without which social living would be impossible.

If the scientific observer is able to penetrate to the typical definitions of the situation prevailing in particular groups, strata, or societies, he is able to make predictions as to the probable response of members of these groups in future situations.

Professor Florian Znaniecki was associated with W. I. Thomas in the pioneering study of the Polish Peasant (1918-1921) in which the "definition of the situation" approach was first developed. He has since extensively developed the initial methodological approaches contained in that study, and the selection here is from one of his major theoretical works. Professor MacIver as a contemporary American sociologist has in his turn insisted upon the crucial significance of subjective interpretations, "dynamic assessments," as he calls them, in the understanding of human action. His social causation may be counted among the sophisticated approaches to the field of sociological method to have appeared in the last quarter of a century.

Thomas One of the most important powers gained during the evolution of animal life is the ability to make decisions from within instead of having them imposed from without. Thomas (91), in discussing the concept of the definition of the situation stated the following:
"Very low forms of life do not make decisions, as we understand this term, but are pushed and pulled by chemical substances, heat, light, etc., much as iron filings are attracted or repelled by a magnet. They do tend to behave properly in given conditions—a group of small crustaceans will flee as in a panic if a bit of strychnia is placed in the basin containing them and will rush toward a drop of beef juice like hogs crowding around swill—but they do this as an expression of organic affinity for the one substance and repugnance for the other, and not as an expression of choice or 'free will.' There are, so to speak, rules of behavior but these represent a sort of fortunate mechanistic adjustment of the organism to typically recurring situations, and the organism cannot change the rule.

"On the other hand, the higher animals, and above all man, have the power of refusing to obey a stimulation which they followed at an earlier time. Response to the earlier stimulation may have had painful consequences and so the rule or habit in this situation is changed. We call this ability the power of inhibition, and it is dependent on the fact that the nervous system carries memories or records of past experiences. At this point the determination of action no longer comes exclusively from outside sources but is located within the organism itself.

"Preliminary to any self-determined act of behavior there is always a stage of examination and deliberation which we may call the definition of the situation. And actually not only concrete acts are dependent on the definition of the situation, but gradually a whole life-policy and the personality of the individual himself follow from a series of such definitions."

He continued,

"... There is therefore always a rivalry between the spontaneous definitions of the situation made by the member of an organized society and the definitions which his society has provided for him. The individual tends to a hedonistic selection of activity; pleasure first; and society to a utilitarian selection, safety first. Society wishes its member to be laborious, dependable, regular, sober, orderly, self-sacrificing; while the individual wishes less of this and more of new experience. And organized society seeks also to regulate the conflict and competition inevitable between its members in the pursuit of their wishes. The desire to have wealth, for example, or any other socially sanctioned wish, may not be accomplished at the
expense of another member of the society, - by murder, theft, lying, swindling, black mail, etc.

"It is in this connection that a moral code arises, which is a set of rules or behavior norms, regulating the expression of the wishes, and which is built up by successive definitions of the situation. In practice the abuse arises first and the rule is made to prevent its recurrence. Morality is thus the generally accepted definition of the situation, whether expressed in public opinion and the unwritten law, in a formal legal code, or in religious commandments and prohibitions" (91, pp. 41-44).

Thomas continued on his discussion of the definition of the situation focusing on the family as the smallest social unit and the primary defining agency. Later in addition to the family he discussed the community as a defining agency also indicating that at present the community is so weak and vague that it gives no idea of the former power of the local group in regulating behavior. Originally the community was practically the whole world of its members. It was composed of families related by blood and marriage and was not so large that all the members could not come together; it was a face-to-face group. However, he maintained that the typical community is vanishing and it would be neither possible nor desirable to restore it in its old form. It does not correspond with the present direction of social evolution and it would now be a distressing condition in which to live. But in the immediacy of relationships and the participation of everybody in everything, it represents an element which we have lost and which we shall probably have to restore in some form of cooperation in order to secure a balanced and normal society,--some arrangement corresponding with human nature (19). A further analysis and discussion of Thomas' concept definition of the situation as well as the forthcoming approaches will be presented later.
in this section. First the attention will be to present various ap-
proaches which will lead to a more complete discussion of the concept
definition of the situation.

Weber   Weber (95) discussed the subjective meaning in the social
situation as follows:

"Sociology is a science which attempts the interpretive
understanding of social action in order thereby to arrive
at a causal explanation of its course and effects. In
'action' is included all human behavior when and in so
far as the acting individual attaches a subjective
meaning to it. Action in this sense may be either overt
or purely inward or subjective; it may consist of
positive intervention in a situation, or of deliber-
ately refraining from such intervention or passively
acquiescing in the situation. Action is social in so
far as, by virtue of the subjective meaning attached
to it by the acting individual or individuals, it takes
account of the behavior of others and is thereby
oriented in its course." (95, p. 88)

Weber continued his discussion indicating that the individual per-
ception of the situation affect his course of action.

Znaniecki   The primary empirical evidence about any cultural human
action is the experience of the agent himself, supplemented by the
experience of those who react to his action, reproduce it, or participate
in it (19). Znaniecki (102) is discussing the subjective meaning in the
social situation stated:

"Every student of culture takes his data with a
humanistic coefficient. The philologist studies a
language as experienced by the people who speak it
and understand it, the economist studies money and
the active use of money as experienced by the people
who use it. ...no body can doubt the data which a good
philologist collects about speaking a language, or a good
economist's data about the functioning of a bank.

"Now, the orthodox behaviorist rejects this primary
empirical evidence as a basis for inductive research.
(He) mentioned only two essential characteristics of
active human experiences which the orthodox behaviorist is prevented by (his) bias from taking into consideration.

"The first of these characteristics belongs to all the experiences of human agents: it is the intrinsic objective meaningfulness of every datum with which the agent deals. Behaviorism reduces the problem of meaning to the meaning of symbols. But for the human agent not only symbols have a meaning, but every datum of his experience in which he is actively interested: every datum stands not only for itself, but for other data which it suggests. At an early stage of mental development this meaning is connected with the possibility of organic experiences suggested by the object; thus, food suggests certain experiences of the organs used in eating and digesting. At this stage it is still possible to substitute for it the concept of 'incipient behavior.' But gradually the meaning expands, includes suggestions of objects outside the organism, and becomes irreducible--even indirectly--to any definite incipient behavior.

"No object as experienced by an active human individual can be defined merely by its sensory content, for on its meaning rather than on its sensory contact depends its practical significance for human activity. Not because of what it 'is' as a natural datum, but because of what it 'means' as a humanistic, cultural datum, does an object of activity appear to the agent as 'useful' or 'harmful,' 'good' or 'bad,' 'beautiful' or 'ugly,' 'pleasant' or 'unpleasant.'

"The second essential point that behaviorism leaves out of consideration in studying human actions is the existence in the experience of human agents of objects which are not only meaningful, but partly--often almost completely--non-material in content and irreducible to sensory perception. Such objects are, for instance, myths and other religious entities, political institutions, contents of literary works, scientific and philosophic concepts. Many words in civilized languages are not used to indicate objects given in sensory experience, but precisely to symbolize non-material, 'spiritual' objects, to stabilize and communicate their contents." (102, pp. 11-17)

In Znaniecki discussion so he says that the individual perception of the situation affect his action directly or indirectly. It is also apparent that the other situational variables play an important role in
terms of providing the individual actor with information about the situation which will set a context for him to comprehend the phenomena and/or the object to which he will act or react.

MacIver also discussed the subjective meaning in the social situation somewhat different from the other theorists reviewed above, however, there are some common elements among all. These common elements will be presented after a brief presentation of MacIver's points. He used illustrative examples in his discussion. MacIver stated,

"A business man sits in his office. He has concluded an important deal. The tension under which he had been working is relaxed. He is back to the everyday routine and it has less savor than before. He is conscious of a vague restlessness. He wants a change of some sort. His days have been to slavishly devoted to the demands of business, he has been missing other things. He has been making money—why shouldn't he spend some, indulge himself a little? Why not take time off and go on a voyage? The business can get along without him for a few weeks. A steamship company's advertisement of a 'luxury cruise,' which he had read some days before, comes to his mind. 'It is just the thing I need,' he says to himself, 'a complete change of scene.' His wife has been warning him against overworking. His family will appreciate him more when he comes back after an absence. The air and sunshine will do him good. He will make new acquaintances. It will be pleasant to visit Río and Buenos Aires and other places he has merely read about. The more he thinks of the idea the better he likes it. Before the day is over he 'makes up his mind' and telephones the steamship company for a reservation.

"What has the business man been doing? He has been assessing a situation and arriving at a decision. He has had alternatives before him and has chosen between them. He is going to travel, for recreation or health or adventure. That is the way he puts it to others—or to himself. His statement of objective is necessarily incomplete and is probably a simplification. Anyhow he has reached a decision, probably without any meticulous calculation. He cannot really tell you how he arrived at it. It is
his dynamic assessment of a situation. In the process of making a decision, some desire, some valuation, simple or complex, has become dominant for the time being, as a determinant of action within the individual's scheme of values.

"In all conscious behavior there is thus a two fold process of selective organization. On the one hand the value-system of the individual, his active cultural complex, his personality, is focussed in a particular direction, toward a particular objective. On the other hand certain aspects of external reality are selectively related to the controlling valuation, are distinguished from the rest of the external world, are in a sense withdrawn from it, since they now become themselves value factors, the means, obstacles, or conditions relevant to the value quest. The inner, or subjective, system is focussed by a dynamic valuation; and the outer, or external, system is 'spotlighted' in that focus, the part within the spotlight being transformed from mere externality into something also belonging to a world of values, as vehicle, accessory, hindrance, and cost of the value attainment.

"In all conscious behavior the situation we assess, as preliminary to action, is in no sense the total objective situation. In the first place it is obviously not the situation as it might appear to some omniscient and disinterested eye, viewing all its complex interdependences and all its endless contingencies. In the second place it is not the situation as inclusive of all the conditions and aspects observable, or even observed, by the participant himself. Many things of which he is aware he excludes from the focus of interest or attention. Many contingencies he ignores. The situation he assesses is one that he has selectively defined, in terms of his experience, his habit of response, his intellectual grasp, and his emotional engrossment.

"The dynamic assessment limits the situation by excluding all the numerous aspects that are not apprehended as relevant to the choice between alternatives. At the same time it includes in the situation various aspects that are not objectively given, that would not be listed in any merely physical inventory. For in the first place it envisages the situation as impregnated with values and susceptible of new potential values; and in the second place the envisagement is dependent on the ever-changing value-system of the individual, charged with memory of past experience, moulded by the impact of previous indoctrination, responsive to the processes of change within his whole psychoorganic being.
Thus no two individuals envisage and define a situation in exactly the same way even when they make a seemingly identical decision and even although social influences are always powerfully at work to merge individual assessments into a collective assessment." (60, pp. 291-299)

The above stated approaches may look different, however, as stated before, there is some common elements among all. These common elements are as follows:

1. All approaches and/or definitions indicated the importance of the subjective meaning in the social situation as related to behavior.

2. All somehow indicate the importance of the situational factors and its affect on individual knowledge and in turn on his action.

3. The individual knowledge and perception of the situation influence his behavior.

4. Individual action is not based only on those situational factors which are in sensory contact with him. At the same time it includes all other aspects of the situation which are not objectively given and not in sensory contact with the individual.

5. Some approaches, such as that of MacIver, discussed the affect of the situation on individual personality in turn on his behavior.

To sum up one might say that the definition of the situation and the factors existing in it appear to have direct and/or indirect affect on the individual personality and in particular on his cognitive world and value system which in turn affect his behavior. The present study
deals only with two types of situational variables. These situational variables are sources of information and competition. It is widely accepted that sources of information bears some affect on the individual knowledge and in turn on his behavior. Also the individual perception of competition in the situation will affect his course of action. The two types of situational variables will be discussed in farther detail in the succeeding parts of this section.

Sources of information

One of the factors in attitude change is the receipt of new information by the individual. Information is used here in its broadest sense, and refers to any input into the mental system. The information must be believed if change in behavior is to occur. Usually, people must rely on secondary sources of information rather than their own direct observation. Before they accept new information, they want to know the motives and credibility of the human source behind the information. Their decision to accept or reject new information and, hence, their willingness to act in relation to certain object, depends partly on their appraisal of the information source.

Krech et al. (52) stated that "Cognitive change is typically initiated by changes in the individual's information and wants" (52, p. 34).

It is a commonplace that as a new information becomes available to a person, changes in his thinking may occur. But, to the psychologist this observation is just the beginning of an understanding of cognitive change. In the first place, the same bit of new information can cause quite different changes in other cognitions. In the second place, just
as it is a commonplace that as new information becomes available to a
person, changes in his thinking may occur, so it is a commonplace that
new information does not always bring about cognitive change and that
sometimes cognitive change—or the drive toward cognitive change—seems
to be initiated by other events than new information. Frequently cogni­tive change is initiated by changes in the individual's wants or environ­ment rather than in his information.

Changes in the wants of the individual and changes in his informa­tion are, in most cases, interdependent (52). As people acquire new
wants, they are led to seek out new information, to learn more. As they
learn more about a subject, new wants may be induced, thus impelling them
to learn still more. It is also possible, of course, that changes in
wants may inhibit the seeking of more information.

It has been pointed out that the same information may have quite
different effects as far as cognitive change is concerned.

More specifically any new bit of information will bring about cogni­tive change, and what the nature of the change will be, depends, in large
measure, on the degree of multiplexity, consonance, and interconnectedness
of the cognitive system which must accommodate to this new bit of informa­tion. The relations, however, between the effectiveness of information
in bringing about cognitive change and the multiplexity, consonance, and
interconnectedness of the pre-existing cognitive system appear to be
highly complicated. Further, relatively little research on these rela­tions has been undertaken by cognitive theorists and experimentalist in
psychology. For these reasons precise generalizations defining these
relations cannot be stated. Some rather simple illustrations of possible
relations can be pointed out. It should be noted that the following
discussion should not be regarded as the conclusions of science, but as
"hunches" of some scientists about an insufficiently explored field.

Contradictory facts and resistance to cognitive change Often a
person is forced to pay attention to new facts, facts that seem not to
fit in with his existing cognitions or that even contradict them. At
times, this results in a fairly radical change of the whole system—a
formerly consonant system may be thrown into disharmony and a widespread
readjustment may result. At other times, however, despite such contra-
dictory facts, a relatively slight cognitive change seems to accommodate
the new facts within the old system. Man continues stubbornly to hold
on to his major beliefs in the face of contradiction after contradiction.

Finally, it may be pointed out that more complex cognitive systems
tend to maintain their major character despite apparently contradictory
facts and experiences. If this were not true, there would be little
stability in cognitive life.

Vulnerability to cognitive change Some cognitive systems seem
to be more vulnerable to cognitive change than do others. A single new
item of information could have a relatively decisive effect on a major
system that was simplex and undifferentiated, but it might have a
relatively minor effect on a multiplex system.

In summary the degree and manner in which changes in wants and
information produce changes in cognition depend upon the multiplexity,
interconnectedness, and consonance of the pre-existing cognitive systems.
Relations between vulnerability to cognitive change and the dimensions
of multiplexity and interconnectedness are complex and little under-
stood. Cognitive systems of high multiplexity are more immune to radical change than those of low multiplexity. No such general relation can be stated for interconnectedness. But no matter how much the cognitive change, the direction of change seems to be such as to approach a more consonant structure. This is true even in those instances where a major system of beliefs seems to be immune to contradictory facts.

Balance theory is an approach to the study of cognitive consonance which is especially concerned with the individual's "affective cognitions" of people and social objects. Balance theory assumes that the cognitive process persistently strives toward balance or consonance. However, balance is often not achieved. This is especially true when cognitive balance would lead to an unpleasant state of affairs for the individual. From the previous presentation, it is apparent that new information can cause change in the individual's cognitive world and in turn in his behavior. As stated before, management behavior is one type of human behavior, therefore, new information can cause change in the manager's management behavior. It is assumed also that the more sources of information the individual uses the more information he gets. It is derived, therefore, that sources of information are assumed to be related to management behavior.

Competition

In recent usage competition is that form of interaction which involves a struggle for goals which are scarce or are believed to be scarce; the interaction is normatively regulated, may be direct or indirect, personal, or impersonal, and tends to exclude the use of force
and violence.

Since the time of C. H. Cooley, sociologists have drawn attention to the fact that the pursuit of scarce ends which others are also pursuing may be carried on without awareness of the others, or if with awareness, without conflict. In his essay 'Personal Competition," Cooley wrote that

"Competition is not necessarily a hostile contention, nor even something of which the competing individual is always conscious... It is eligibility to perform some social function that makes a man a competitor, and he may or may not be aware of it, or, if aware of it, he may or may not be consciously opposed to others." (17, p. 165).

Another approach which is strongly influenced by the biological and economic views of the late 19th and early 20th centuries, R. E. Park and E. W. Burgess made competition, conceived as unconscious and impersonal, the cornerstone of the field of human ecology (69). They described competition as "the elementary, universal, and fundamental form" of interaction, and added that it is "strictly speaking...interaction without social contact" (69, p. 507). This was qualified, however, by the statement that "in human society competition is always complicated with other processes (of interaction)" and that "competition among men...has been very largely converted into rivalry and conflict," which were regarded as conscious and personal (69, pp. 506, 512).

However, recent usage tends to broaden the meaning of competition to refer to the conscious or unconscious, personal or impersonal,

*For further details see R. E. Park and E. W. Burgess (69).
pursuit of scarce ends within a framework of rules. It tends to emphasize Cooley's point that where competition is impersonal, it is so because the individual is oriented toward the goal rather than toward his competitors. K. Young defines competition as

"...a less violent form of opposition in which two or more persons or groups struggle for some end or goal but in the course of which attention is focused chiefly on reward rather than on the competitor" (100, p. 64).

Personal rivalry may still be considered competition, however, if it occurs under the governance of rules which exclude fraud and violence, and limit attention to the rival's relationship to the scarce goal. K. Davis makes this the key to his distinction between competition and conflict

"...competition simply aims to outdo the competitor in achieving some mutually desired goal... It implies that there are rules of the game to which the competitors must conform and that behind these rules, justifying and maintaining them, is a common set of values superior to the competitive interest. It also implies an absence of coercion. ...the rules of competition limit the means that may be used. ...When competition breaks through the rules it transforms itself into conflict" (21, p. 162).

Current psychological usage accepts the idea of scarce goals as characteristic of the competitive situation and does not concern itself explicitly with the questions of impersonality and normative regulation.

It might be relevant here to define the term conflict and differentiate it from competition. Conflict may be defined as "a struggle over values and claims to scarce status, power and resources in which the aims of the opponents are to neutralize, injure or eliminate their rivals" (18, p. 8).
An analysis of the literature reveals that the term conflict is defined with a number of different emphases. According to one school of thought, which might be said to stem from the work of G. Simmel and to have been developed in America by R. E. Park and his co-workers, conflict is seen as one of the central forms of interaction. Simmel (88a) writes,

"If every interaction among men is a sociation, conflict...must certainly be considered as sociation... Conflict is...designed to resolve divergent dualisms; it is a way of achieving some kind of unity, even if it be through the annihilation of one of the conflicting parties" (88a, p. 13).

Park and Burgess (69) likewise treat conflict, as well as competition, as forms of interaction. In contrast to this view a number of scholars have seen in conflict a dissociative process. Thus G. A. Lundberg (58) finds that conflict is characterized by a suspension of communication between the opposing parties.

Those who see in conflict a form of social interaction have been led to attempt to distinguish it from competition. Park and Burgess (69) say that conflict, as distinct from competition, is always conscious and involves direct communication: "Both are forms of interaction, but competition is a struggle between individuals, or groups of individuals, who are not necessarily in contact and communication, while conflict is a contest in which contact is an indispensable condition. Competition... is unconscious. Conflict is always conscious... Both competition and
conflict are forms of struggle. Competition, however, is continuous and impersonal, conflict is intermittent and personal" (69, p. 574).

A number of scholars have attempted to distinguish between conflict and competition mainly in terms of the means used by goal-oriented antagonists. Thus R. M. MacIver (59), while defining conflict as all activity in which men contend against one another for any objective, proceeds to distinguish between what he terms "direct conflict" and "indirect conflict." Direct conflict "occurs where individuals or groups thwart or impede or restrain or injure or destroy one another in the effort to attain some goal" (69, p. 51). Indirect conflict occurs "where individuals or groups do not actually impede the efforts of one another but nevertheless seek to attain their ends in ways which obstruct the attainment of the same end by others" (69, p. 51).

In economics competition has retained a meaning close to its general definition as a social process and includes elements of striving and/or rivalry with respect to scarce goods, of attempts at excellence, of rationality as the actual or postulated psychological approach to the market situation, and of the effort to maximize the achievement of goals, in this case profit. Subforms of competition in economics are defined by the conditions of the market situation and by the dominance of striving or rivalry.

From the above definitions and discussion of the term competition as situational factor, it appears that it does have some affect on the individual's action and interaction. Since management behavior is one type of human behavior. It is derived, therefore, that competition is related to management behavior.
So far the preceding discussion dealt with the factors and/or variables which affect human behavior which, in a sense, present only the first half of the developed analytical model. A theoretical discussion of the second half of the developed analytical model which indicates the affect of management behavior or performance on economic performance will follow.

Output of Behavior Practices

As it is stated before, in developing the analytical model, the individual's behavior practices has certain output or affect on the others and/or the social system in which he conducting his behavior. It is recognized also that the main objective of every cooperative is to handle the volume of goods and services necessary to maximize unit net savings within the framework of management's responsibility to members, labor and the public.

Every manager of a cooperative today faces the need for the orientation of his business toward the goal of optimum efficiency. In the very beginning, if the combination of land, labor, capital, and equipment is not properly organized, he has an unbalanced economic unit. High costs and low profit margin eventually force him into financial difficulty and obscurity. If the cooperative manager has too large a plant for the business available, overhead costs reduce operating efficiency. Conversely, if the capacity is too small for the potential business, he is not organized to reap maximum net savings. If equipment is not maintained and production is not well planned, waste and stoppage soon develop. If personnel are poorly selected and trained, or improperly
placed in the plant, disharmony and resulting inefficiency soon evolve. If the financial operation is not well planned, bankruptcy may be the result. These and many others are problems facing the manager of a farmer-cooperative in his everyday association with his business. The efficiency with which he performs his function as a manager, his management behavior and his performance on each function of management as previously defined, in the face of competition may well decide success or failure for the cooperative activity and the investment of the farmer members of the cooperative association. Management also needs to emphasize carefully the distinction between economizing and conserving. Economizing uses resources wisely and prudently in the accomplishment of a goal while conservation abstains or forebears in their use. Economizing may or may not result in saving and conversely saving may or may not result in economizing.

**Economizing not saving**

Management of the business firm is not, or should not be, interested in saving but rather in economizing. Its task is not to save resources but to use resources wisely. If the goal were to save resources it could do so but at the expense of profit. In fact, at the extreme it could save all resources and that would, of course, result in no profit. There would be no loss either, but if profit maximization is the objective, the goal of saving conflicts directly with that of economizing (78).

Emphasis on the practice of economizing rather than saving focuses attention on the relationship between the use of resources and the goals of the enterprise. Economizing seeks to allocate available resources as
intelligently as possible in the accomplishment of specified goals such as profit. The analysis of resource use to achieve goals then becomes a quite different task than the analysis of resources use for the purpose of saving, storing, or hoarding. The issue becomes not how, why, or when to save, but rather how to determine the efficiency of different resource allocations in accomplishing certain objectives (78).

The problem of economizing

One of the basic problems contributing to this confusion is the difficulty of securing information to guide economizing, information on costs and especially benefits of resource allocation. To economize one needs to know the consequences of alternative resource allocations so as to compare benefits. In deciding between alternative investment opportunities in equipment, one needs information on the net relative returns that can be expected from the alternatives. Savings, on the other hand, can usually be measured much more easily.

This problem of economizing rather than saving is particularly acute where the benefits of an allocation are almost impossible to measure. Examples would include allocation of resources for public relations, advertising, and education. In public administration, economizing is especially complex because of this difficulty in measuring benefits or consequences.

Economizing in the business firm or association

In the business firm with the presence of the market system, it is difficult for management to secure the information needed to economize in the allocation of resources. The price system does, of course, give
the business manager some significant guides. If management can match
costs and market prices it has some information to guide it in selecting
products to which it wishes to allocate resources and from which to
withdraw resources.

Some resource allocations in the business firm or association are
not directly related to the price systems. Two examples would be the
expenditures for advertising and for the operation of the credit depart­
ment. In both cases, it is difficult to determine the point which will
allow the most efficient return per dollar invested. Accounts receivable
represents for the department stores one of the biggest items on the
balance sheet. It is not unusual for more money to be invested in them
than in merchandise.

The manager of the business firm finds himself in need of analytical
tools to assist in the economic evaluation of the firm's use of resources.
Where the manager of the firm does not have an economic analysis available
and is not equipped to make one, he must resort to other bases to allo­
cate resources or to evaluate existing practices. Custom, tradition,
and imitation are often used.

The time honored practice of allocating to the advertising program
a fixed percentage of sales is a case in point. The budget of the credit
department may be based on its physical needs to process the additional
accounts that the credit manager is adding. In neither of these cases
is there an economic base for the decision.

Yet another alternative upon which to base resource allocation is
the political one. The allocation for a department may simply be negoti­
ated between the department head and management. If management feels
that an expenditure is getting too large, the approach in reducing it may be quite arbitrary. A fixed percentage may be selected.

In each of the examples offered there is the difficult problem of finding a measure of performance to use in evaluating the allocation. The lack of this measure may result in a pressure from management to save money which may result in the reduction of expenditures, but not necessarily result in economizing. On the other hand, a persuasive department head may secure an increased allotment which, too, will not necessarily result in increased output, much less in economizing.

From the above presentation and previously stated role of management in the business firm and/or association it is clear that management bears direct affect on allocating the resources of the firm and in turn its efficiency in operation such as total sales and cost per dollar sales. The output of management practices, in terms of efficiency in operation, will affect, or be related to, the economic performance of the firm and/or the association. The ultimate goal of the manager in the present study is to maximize the net returns and income of the individual member of the farmer cooperative association.

Having presented the theoretical grounds on which the developed analytical model stands and the theoretical concepts utilized in this study the attention will now be directed to the derivation of hypotheses to be tested in the present study. However, before moving to the derivation of hypotheses section the theoretical concepts, previously stated, will be presented in the form of the developed analytical model in Figure 4.
Figure 4. The theoretical concepts in the form of the developed analytical model
DERIVATION OF HYPOTHESES

As stated before, when an individual is confronted with a stimulus he interprets that stimulus in the context or situation in which it was received and subsequently responds to the stimulus and its interpretation. It is in the interpretation phase of the process when values and attitudes, and knowledge, as well as other individual characteristics and situational factors play an important role. In this phase the individual reviews his past experience looking for previous encounters with similar stimuli. If he finds examples of such encounters he attempts to recall his responses in those cases and his degree of satisfaction or dissatisfaction with the outcomes of his actions. He then evaluates the present situation in terms of his past responses and his aims in the present situation. This part of the thesis will be devoted to the presentation of the general and specific hypotheses to be tested in this thesis.

Attitudes

Based upon the preceding discussion, it is clear that attitudes are one of the factors determining the degree of canalization of the interpretation and response of stimuli. Embodying tendencies toward action, perceptions, and affective properties, they form a basis for the interpretation of the stimulus. Thus attitudes would be expected to be related to human behavior and in turn to management behavior. The direction of the relationship should be predictable. Thus this assumed relationship could be stated in hypothetical form as follows:

General hypothesis 1: There will be a relationship between
a manager's attitudes and his management behavior (or performance).

Since there are five types of management behavior, as previously stated, it appears logical and legitimate to derive the following five sub-general hypotheses.

**Sub-general hypothesis 1:** There will be a relationship between a manager's attitudes and his management general planning and decision making performance.

**Sub-general hypothesis 2:** There will be a relationship between a manager's attitudes and his management organizing and staffing performance.

**Sub-general hypothesis 3:** There will be a relationship between a manager's attitudes and his management directing and leading performance.

**Sub-general hypothesis 4:** There will be a relationship between a manager's attitudes and his management coordination and communication performance.

**Sub-general hypothesis 5:** There will be a relationship between a manager's attitudes and his management controlling performance.

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*As previously stated this study is dealing with the actual behavior of the manager. The term performance will be used to indicate the manager's actual behavior.*
Studies relating the attitudes of managers to their management behavior (performance) are few. One reason offered by Himes (40) for this paucity of data has been the difficulty in determining individual managerial performance in any quantitative sense. Supervisory personnel have been studied using peer and superior ratings, but top management personnel have rarely been analyzed in the same manner.

Attitudes in this study were synthesized from three broad areas—general overviews of the value and attitudinal orientation of American society, data pertaining to the existence of various values and attitudes in the rural segment of the American society, and attitudes usually associated with the "business world" with managers specifically. Each attitude will be defined as it was developed at this stage of the study. Because of the eclectic derivation of the various attitudes, rather than their deduction from an integrated value-attitude complex, each attitude dimension will be treated separately in conjunction with the evidence presented for its selection.

**Individual orientation toward profit**

Williams (96), in a preliminary yet comprehensive overview of value themes in American society, delineated a theme which he called "material comfort" as a dominant value. Many writers have noted the prominent emphasis Americans place on material aspects of their world. "Acquisitiveness," "prosperity," and success defined in economic terms are adjectives often used to describe America (96). "The enterprise creed" has been outlined by Brewster (13) as an important set of values in American life. He notes that at the core of this creed is the injunction
that "...the individual (or his immediate family) is and ought to be responsible for his own economic security throughout life" (13, p. 119). Supporting this placement of economic responsibility solely on the shoulders of the individual are several concurrent themes in the society. One of these is the stress on "individualism" which will be more fully discussed below. Here it should be noted, however, that the individual is held responsible for his own success or failures. The basis for any casual analysis of the events in the life of a person must ultimately focus on his actions. Concurrent with individual emphasis is the heavy stress on the economic aspect of success (96). Here it is noted that the acquisition of money was a handy symbol for the American in a society of high social mobility in which position basically depends upon occupational achievement. A third important force in this development is that provided by the moral worth that all work or activity took on in the development of the society (96). Often attributed to what has been called the Protestant Ethic; "works" or material success was interpreted as a sign of individual salvation. It then became obvious who was moral or good and to be thusly regarded one needed only to build a reputation for honesty and fair dealing while being economically fruitful.

These forces have combined to impart a high degree of motivation toward economic ends in certain sectors of the population. Notable among these sectors are managers whose primary goal so often stated is to maximize the profits of the business they manage. Although there is some controversy as to the exact nature of the goals of a business firm or association, however, it is clear in the present study that the goal of
the manager is to maximize the income of the individual members of the farmer cooperative. In order to do that he also must maximize the profits of his operation. There can be no doubt as to the existence of a wide diversity of adherence to the economic emphasis in the society. It will be assumed, therefore, that these forces have combined to produce differential motivation to people in various sectors of the population.

When a value theme as dominant and diffuse as that of the primacy of economic ends is in this country, there will undoubtedly arise various interpretations of it or dimensions within it. Based on the preceding discussion one might see that the manager would be expected to be oriented toward economic ends. The primary means a manager of a business has for achieving economic ends is through profit maximization of his business. Often, as was the case in nearly all of the dealers participating in this study, maximization of business profit does not immediately reward the manager. Rather, he is salaried and, though certain bonus plans tie a small percentage of his salary to the profits of the association, most substantial increases come from a decision of the board of directors as a reward for performance. In many cases a salary review comes annually. It will therefore be assumed that the manager is quite directly rewarded for his ability to increase the profits of a business. An important attitude for a manager will thus be his attitude toward profit accumulation in his business. This attitude can be defined as the degree to which an individual's orientation is one of making profits for the business through his managerial position. Thus, one might derive also that the higher the manager's orientation toward making profits the
higher will be his management performance. Thus the following specific hypotheses could be derived.

**Specific hypothesis 1:** There will be a positive relationship between a manager's attitude toward making profits and his management general planning and decision making performance.

**Specific hypothesis 2:** There will be a positive relationship between a manager's attitude toward making profits and his management organizing and staffing performance.

**Specific hypothesis 3:** There will be a positive relationship between a manager's attitude toward making profits and his management directing and leading performance.

**Specific hypothesis 4:** There will be a positive relationship between a manager's attitude toward making profits and his management coordination and communication performance.

**Specific hypothesis 5:** There will be a positive relationship between a manager's attitude toward making profits and his management controlling performance.

**Individualism**

One of the most dominant value themes in American society, explicitly delineated by numerous writers, is the idea of the supremacy of the individual. "...to be a person is to be independent, responsible, and self-respecting, thereby to be worthy of concern and respect in one's own right" (96, p. 463). While Williams (96) notes the diffuseness of this value in American Society in spite of repeated attacks in the form of more collective orientations, Warland (93) has pointed out the numerous
times the word "individualism" is used to describe the rural segment of
the American society. Bernard (10), Landis (54), Taylor (90), and
Hobbs (41) all stress the idea of individual self-reliance and self-
sufficiency. Also several writers have attested to the fact that there
has been developed a norm of individualism whereby an individual not
only attempts to be self-sufficient in most of his areas of life, but
was expected to by his neighbors. Nurtured by physical isolation during
frontier periods in American history and by associated aspects of the
Protestant ethic, this attitude, often called "rugged individualism,"
is expressed in terms such as "go it alone," "not obligated to any man,"
able to stand alone," "Master of his fate," and the willingness to back
up his decisions. This attitude will be defined as the degree to which
a manager's attitude toward his cognitive world is one of active,
aggressive, "rugged individualism."

While a certain amount of teamwork is a necessary attribute in any
business, management teamwork in the sense of tight control over the
organization by several individuals is needed less in a farm supply
business than in many other businesses.

In a small business the relationship of the manager to one or two
employees, though closer than in a larger firm, is still one of an
employer-employee nature. The concept of teamwork by peers is not useful
in this case. The general manager is in a controlling position by virtue
of his knowledge of the capacity and day-to-day operation of the business
and his role of advisor to overall management. Baume1 and Fuller (7)
in studying local agribusiness firms, focus on the role of the manager
as the most influential position. Taking into account the information
from all levels of the business the manager makes decisions on the synthesis he brings out of the available material. To the extent that he perceives it necessary to develop his position independently of others in the system, or to express himself in terms of the ethic of individualism, he can be expected to make satisfactory decisions regarding the daily operation of the entire business. This attitude is defined as the degree to which a manager's attitude toward his cognitive world is one of active, aggressive, "rugged individualism." Thus one might expect that the higher the manager's attitude toward individualism the higher will be his management performance in terms of firm decisions and actions. Based on this discussion, the following specific hypotheses can be derived.

Specific hypothesis 6: There will be a positive relationship between a manager's attitude toward individualism and his management general planning and decision making performance.

Specific hypothesis 7: There will be a positive relationship between a manager's attitude toward individualism and his management organizing and staffing performance.

Specific hypothesis 8: There will be a positive relationship between a manager's attitude toward individualism and his management directing and leading performance.

Specific hypothesis 9: There will be a positive relationship between a manager's attitude toward individualism and his management coordination and communication performance.

Specific hypothesis 10: There will be a positive relationship between a manager's attitude toward individualism and
his management controlling performance.

**Independence**

This attitude dimension is defined as the degree to which an individual wishes to remain independent of those around him. This attitude dimension might appear as synonymous to individualism, however, they are two different dimensions of what one might call attitude toward independence in general. Attitude toward individualism is considered to be the normative dimension of the general attitude toward independence. Here the individual's desire for self-reliance has led to the desire to be one's own boss, to manage one's own affairs and not to rely on others for help (93). Transferred to the setting of cooperative managers, this attitude comes directly into contrast with the idea of collective action. How a manager perceives the correct responses to members of his bureaucracy becomes a crucial attitudinal variable in the operation of his business. In cooperatives, more so than in any other farm supply or any other small retail business, the manager is affected not only by restrictions imposed by superiors and the ability of subordinates, but also by comments from daily contact with member patrons as they are channeled through board members.

The logic for the proposed relationship of this attitude to performance of the role of manager is somewhat close to that presented under the previous paragraph heading for individualism. Based on that discussion the specific hypotheses are:

**Specific hypothesis II:** There will be a positive relationship between a manager's attitude toward independence and his management general planning and decision making performance.
Specific hypothesis 12: There will be a positive relationship between a manager's attitude toward independence and his management organizing and staffing performance.

Specific hypothesis 13: There will be a positive relationship between a manager's attitude toward independence and his management directing and leading performance.

Specific hypothesis 14: There will be a positive relationship between a manager's attitude toward independence and his management coordination and communication performance.

Specific hypothesis 15: There will be a positive relationship between a manager's attitude toward independence and his management controlling performance.

Management orientation

Rural society has traditionally believed that man does not control what happens to him via external forces (40). This fatalistic approach probably developed due to the high dependence of the farmer upon nature with little perceived mastery over it. In direct contrast to this has developed the concept of science which is "highly esteemed as a tool for controlling nature" (96, p. 454). There is no doubt that science as a value is highly regarded in American society (54). In this context, it is the scientific method or approach that is of concern. This represents an approach to problem solving and decision making which has found high esteem in business circles and is associated with economic rationality (42).

The translation of the mastery-fatalistic dimension to the rural
cooperative setting is quite direct. It becomes important whether the manager's attitude toward his own position is one of dependence upon external forces, in this case the market, the economy, the government and the farmer's situation, or whether it is one of mastery via efficient decision making based upon known facts and risk probability distributions. It is the case of whether the manager is oriented more toward the traditional rural attitudes or those of the business sector of society, a continuum characterized by the degree of presence or absence of mastery. This attitude, management orientation, is defined as the degree to which an individual feels he can influence the financial outcomes of the business through his managerial position. Thus one would expect the higher the manager's management orientation the higher his management performance as manager. Therefore one might expect a positive relation between a manager's management orientation and his management performance. Thus the following specific hypotheses could be derived.

Specific hypothesis 16: There will be a positive relationship between a manager's attitude toward his management position as differentiated along a continuum of mastery and his management general planning and decision making performance.

Specific hypothesis 17: There will be a positive relationship between a manager's attitude toward his management position as differentiated along a continuum of mastery and his management organizing and staffing performance.

Specific hypothesis 18: There will be a positive relationship between a manager's attitude toward his management position as differentiated along a continuum of mastery and
his management directing and leading performance.

**Specific hypothesis 19:** There will be a positive relationship between a manager's attitude toward his management position as differentiated along a continuum of mastery and his management coordination and communication performance.

**Specific hypothesis 20:** There will be a positive relationship between a manager's attitude toward his management position as differentiated along a continuum of mastery and his management controlling performance.

**Job definition**

Williams (96) has pointed out that numerous writers have observed an orientation of American people that can be described by a work or activity orientation. Americans place a great "emphasis upon work as an end in itself" (96, p. 423). Both Hobbs (41) and Williams (96) note that this emphasis permeated the agrarian sector of American society in a form in which physical work has been at the core of the emphasis. Again a sharp contrast is drawn, this time between the more traditional emphasis on physical work and the analytical and rational character of the management process. As Hobbs (41) notes, most primary economics textbooks treat management as the key to economic success given the comparable and quite homogenous physical inputs including labor. The character of farm supply businesses is such that often a manager must help (physically) with certain operations, especially during rush seasons or in the absence of one man in a labor crew numbering as small as two or three. The manager's attitude toward the evaluation of
alternative uses of his time becomes an important variable influencing the outcomes of his decisions.

As was discussed earlier, no uniform definition of management exists today, however most writers agree that it is primarily an analytical and rational process the outcomes of which are the making of decisions and their implementation. The character of this process is obviously quite mental in nature. Thus, the specific attitude which will be dealt with is defined as the degree to which a manager defines the managerial job in terms of positive, flexible control based on mental activity in the handling of people and other business resources (50) rather than in terms of physical work. This will be conceptualized in terms of mental activity.

The approach to behavioral prediction taken in this study is to delineate a set of normative expectations placed on a role and then to compare a form of actual behavior to the set of expectations. As noted before, students of management have defined it as a primarily analytical and rational process. Using this as a significant set of expectations at the general level, it can be postulated that managers who define their job in the same way can be expected to perform their role more adequately. Thus the following specific hypotheses could be derived.

**Specific hypothesis 21:** There will be a positive relationship between a manager's definition of his job as differentiated along a continuum of mental activity and his management general planning and decision making performance.

**Specific hypothesis 22:** There will be a positive relationship between a manager's definition of his job as differentiated
along a continuum of mental activity and his management organizing and staffing performance.

Specific hypothesis 23: There will be a positive relationship between a manager's definition of his job as differentiated along a continuum of mental activity and his management directing and leading performance.

Specific hypothesis 24: There will be a positive relationship between a manager's definition of his job as differentiated along a continuum of mental activity and his management coordination and communication performance.

Specific hypothesis 25: There will be a positive relationship between a manager's definition of his job as differentiated along a continuum of mental activity and his management controlling performance.

Progressivism

A conservative approach to the world has often been pointed out as an attribute of rural America (93, 10, 54). Landis (54) feels this conservatism has grown out of several conditions such as the fact that the farmer works for himself, his returns even after much planning and waiting are quite uncertain, and he thus finds it advantageous to continue unhindered in traditional practices. Warland (93) and Hobbs (41) specifically note the association of conservatism with traditional practices and policies and the lack of innovativeness in rural areas.

In direct contrast to this has been what Williams has called the "cult of progress" (96, p. 431). This quite unrestricted optimism has led to
an almost unquestioning assumption that the new is better than the old. In the course of its development this value became associated with technological innovation and economic rationalization and concentration (96, p. 433). Progress thus justifies new technical innovations and has become associated with the application of science in any area of human endeavor.

These two contrasting orientations form polar ends of a continuum which has relevance to the performance of managers. The greater managerial efficiency which has resulted from the application of technological innovations and rational approaches to problems underline the importance of evaluating, trying and being willing to adopt new methods of running one's business. This continuum of progressivism will be specifically defined as the extent to which an individual is oriented toward trying and accepting new ideas and practices in his business (40).

Because of the rapid changes taking place in all sectors of society due to the implementation of economic, technological, and social innovations and because changes are often, though not always, grounded to some degree in a more analytical approach to a problem or an attempt to adapt to a set of conditions not present at an earlier time, these changes have often resulted in improved outcomes or advancement toward goals. The past association of science with innovation and the relative success of analytical decision-making in managerial roles provides an additional basis for postulating that the willingness to try and evaluate new practices in one's business will vary directly with the economic success and/or performance of that business. Thus the following specific hypotheses will be derived.
Specific hypothesis 26: There will be a positive relationship between a manager's attitude toward progressivism and his management general planning and decision making performance.

Specific hypothesis 27: There will be a positive relationship between a manager's attitude toward progressivism and his management organizing and staffing performance.

Specific hypothesis 28: There will be a positive relationship between a manager's attitude toward progressivism and his management directing and leading performance.

Specific hypothesis 29: There will be a positive relationship between a manager's attitude toward progressivism and his management coordination and communication performance.

Specific hypothesis 30: There will be a positive relationship between a manager's attitude toward progressivism and his management controlling performance.

Risk preference

An attitudinal dimension of importance in management theory is a manager's orientation to risk. In general, risk has been defined as the deliberate involvement of elements beyond the control of the individual to obtain given ends (93). This must be distinguished from uncertainty which implies a complete lack of knowledge about the outcomes of an event. Risk involves a known set of probabilities with which the outcomes will fall (42). Here again, as in several attitudes just presented, a definite contrast exists in various traditions which may shape the attitudes of any given manager. The first is the traditional rural aversion
to risk as delineated by several writers (42, 54, 93). The long wait before any returns to a farming operation are received, the relative uncertainty of these returns, and the consequent attempts to reduce risk by using time honored methods have all contributed to the development of this attitude (93). The contrast is with the orientation toward risk which has been developed extensively in the modern business. This willingness to use risk is an example of the general orientation of the larger part of society to master the external world rather than submit to it. It has thus been associated with more analytical or scientific approaches to decision-making, innovativeness, and in general a more scientific view of the world. The specific attitude of concern, risk orientation, is defined as the degree to which an individual is willing or perceives it advantageous to involve elements beyond his control to attain economic ends (40).

Hobbs (41) has provided an adequate rationale for the expectation of a positive relationship between orientation toward risk and economic returns to farm management. In the face of short run uncertainty, managers tend toward suboptimization of their decisions and profit by either compromising for fear his expectations are inaccurate or attempts to optimize and his expectations are, in fact, not fulfilled exactly (41). In attempting to reduce this uncertainty, a manager may spend time beyond the point of adequate returns on this time in collecting information for the decision. There is also the tendency to reduce risk by not using all the capital available to him and thus suboptimize his resources (41). Among local cooperative managers, some degree of familiarization with the ideas and practices of the business world can
be assumed. The question arises as to whether the managers tend to err
greater through conservation (risk aversion) or through extreme risk
orientation. Due to the societal setting of this population and for the
purposes of this analysis, it will be assumed that the errors tend to
be conservative in nature and that, in spite of the probable existence
of an optimal attitudinal level, orientation toward risk will be posited
as being positively and linearly related to performance and outcome.
Thus the following specific hypotheses are derived.

Specific hypothesis 31: There will be a positive relationship
between a manager's attitude toward assuming risk and his
management general planning and decision making performance.
Specific hypothesis 32: There will be a positive relationship
between a manager's attitude toward assuming risk and his
management organizing and staffing performance.
Specific hypothesis 33: There will be a positive relation­
ship between a manager's attitude toward assuming risk and his
management directing and leading performance.
Specific hypothesis 34: There will be a positive relationship
between a manager's attitude toward assuming risk and his manage­
ment coordination and communication performance.
Specific hypothesis 35: There will be a positive relation­
ship between a manager's attitude toward assuming risk
and his management controlling performance.

Tradition

In any management situation a concern of decision making and problem
solving is the optimum combination of levels of inputs. In a management setting a manager could use the scientific approach as well as his own skills to solve management problems and in making major decisions concerning the business. However, some managers rely on traditional means in making decisions and in solving problems. In general it seems more logical and acceptable to follow the scientific method in management which is based on facts and research in the field of management in order to be successful and achieve the goals of the business. This attitude dimension is defined as the degree to which a manager prefers traditional means of managing a business. Based on the above presentation one might expect negative relation between this attitude and management performance. In other words, the more a manager depends on traditional means of management the more he will be a poor manager. Thus the following specific hypotheses could be derived.

**Specific hypothesis 36:** There will be a negative relationship between a manager's attitude toward traditional means of management and his management general planning and decision making performance.

**Specific hypothesis 37:** There will be a negative relationship between a manager's attitude toward traditional means of management and his management organizing and staffing performance.

**Specific hypothesis 38:** There will be a negative relationship between a manager's attitude toward traditional means of management and his management directing and leading performance.

**Specific hypothesis 39:** There will be a negative relationship
between a manager's attitude toward traditional means of management and his management coordination and communication performance.

Specific hypothesis 40: There will be a negative relationship between a manager's attitude toward traditional means of management and his management controlling performance.

A summary of the hypothesized relationships between attitude dimensions and types of management behavior (performance) is presented in Figure 5. The methods of measuring the concepts presented in the above hypotheses will be presented in the succeeding parts of this thesis.

Knowledge

As previously stated an individual's knowledge is defined as the information which helps him to set a context for the social phenomena to be more easily comprehended. In other words knowledge means possessing or being the possessor of information about anything. The individual must have knowledge to act in relation to both ends and means.

What a manager of a farmer cooperative association knows depends upon what he had learned from various past experiences and learning opportunities. Also the manager knowledge level determines his rational action.

Early in this thesis the relationship between knowledge and human behavior and in turn management behavior has been discussed on theoretical basis. Based on that theoretical approach and past research statements of hypotheses pertaining to this variable the following general hypothesis is derived.
Figure 5. Hypothesized relationships between attitudes and types of management behavior (performance)
General hypothesis 2: There will be a relationship between a manager's knowledge and his management behavior. Since there is five types of management behavior, thus one might derive the following sub-general hypotheses.

**Sub-general hypothesis 6:** There will be a relationship between a manager's knowledge and his management general planning and decision making performance.

**Sub-general hypothesis 7:** There will be a relationship between a manager's knowledge and his management organizing and staffing performance.

**Sub-general hypothesis 8:** There will be a relationship between a manager's knowledge and his management directing and leading performance.

**Sub-general hypothesis 9:** There will be a relationship between a manager's knowledge and his management coordination and communication performance.

**Sub-general hypothesis 10:** There will be a relationship between a manager's knowledge and his management controlling performance.

As stated before a manager's knowledge depends upon what he has learned from various formal learning opportunities and past relevant experiences. It has been stated also that knowledge level bears direct affect on the manager's action and decision making.

However, for the purpose of this study a manager's knowledge variables have been categorized into three categories. These categories are:
(1) formal learning opportunities variables
(2) past relevant experiences variables
(3) level of knowledge variables.

Formal learning opportunities

Formal learning opportunities are defined as those formal educational opportunities and/or training programs which provide and/or help the manager to better understand his role in a management setting. It is assumed that the more knowledge the manager has about his role in the association the more he becomes efficient in his work. Thus efficient management will lead to higher business efficiency. Formal learning opportunities variables include:

(a) manager's years of formal education,
(b) manager's years of vocational agriculture,
(c) management training,
(d) any specialized training in any of the major product lines of the cooperative association or any specialized training in management itself (i.e., workshops, short courses, conferences, etc.).

Thus, it is expected that the more formal learning opportunities a manager had the more he will be able to handle management problems. Therefore, it is derived that a manager's formal learning opportunities will be positively related to his management performance. Thus the following specific hypotheses will be derived.

Specific hypothesis 41: There will be a positive relationship between a manager's years of formal education and his manage-
ment general planning and decision making performance.

**Specific hypothesis 42:** There will be a positive relationship between a manager's years of formal education and his management organizing and staffing performance.

**Specific hypothesis 43:** There will be a positive relationship between a manager's years of formal education and his management directing and leading performance.

**Specific hypothesis 44:** There will be a positive relationship between a manager's years of formal education and his management coordination and communication performance.

**Specific hypothesis 45:** There will be a positive relationship between a manager's years of vocational agriculture and his management controlling performance.

**Specific hypothesis 46:** There will be a positive relationship between a manager's years of vocational agriculture and his management general planning and decision making performance.

**Specific hypothesis 47:** There will be a positive relationship between a manager's years of vocational agriculture and his management organizing and staffing performance.

**Specific hypothesis 48:** There will be a positive relationship between a manager's years of vocational agriculture and his management directing and leading performance.

**Specific hypothesis 49:** There will be a positive relationship between a manager's years of vocational agriculture and his management coordination and communication performance.

**Specific hypothesis 50:** There will be a positive relationship
between a manager's years of vocational agriculture and his management controlling performance.

**Specific hypothesis 51:** There will be a positive relationship between a manager's amount of management training and his management general planning and decision making performance.

**Specific hypothesis 52:** There will be a positive relationship between a manager's amount of management training and his management organizing and staffing performance.

**Specific hypothesis 53:** There will be a positive relationship between a manager's amount of management training and his management directing and leading performance.

**Specific hypothesis 54:** There will be a positive relationship between a manager's amount of management training and his management coordination and communication performance.

**Specific hypothesis 55:** There will be a positive relationship between a manager's amount of management training and his management controlling performance.

**Specific hypothesis 56:** There will be a positive relationship between any specialized training the manager had and his management general planning and decision making performance.

**Specific hypothesis 57:** There will be a positive relationship between any specialized training the manager had and his management organizing and staffing performance.

**Specific hypothesis 58:** There will be a positive relationship between any specialized training the manager had and his management directing and leading performance.
Specific hypothesis 59: There will be a positive relationship 
between any specialized training the manager had and his 
management coordination and communication performance. 
Specific hypothesis 60: There will be a positive relationship 
between any specialized training the manager had and his 
management controlling performance.

Past relevant experience

Past relevant experience is that type of knowledge which is received 
by the manager through his working as well as his practical life. This 
type of knowledge may be assumed to increase the manager's management 
effectiveness in a management setting. Past relevant experience vari­
ables, in this study, are manager's management experience, manager's 
farm work experience, and manager's years as the manager of this farmer 
cooperative association. It is assumed that the more experience the 
manager had in similar kind of work the more he will be able to make 
intelligent decisions and to solve management problems. It is also 
assumed that in order to render better services to the farmers who are 
members of the cooperative association, the manager should be familiar 
with farming as a business and farm operations. Thus, it might be 
hypothesized that the more farm work experience the manager had the 
higher will be his management performance. The last dimension of experi­
ence in this study is that of the manager's familiarity with the business 
he manages. It is assumed that the longer the manager stays in a busi­
ness the more familiar he will become with it, therefore, he should be 
able to handle its management problems more effectively. On the basis
of the above rational a manager's years as the manager of the business is expected to be positively related to his management performance. Thus the following specific hypotheses could be derived.

Specific hypothesis 61: There will be a positive relationship between a manager's amount of management experience and his management general planning and decision making performance.

Specific hypothesis 62: There will be a positive relationship between a manager's amount of management experience and his management organizing and staffing performance.

Specific hypothesis 63: There will be a positive relationship between a manager's amount of management experience and his management directing and leading performance.

Specific hypothesis 64: There will be a positive relationship between a manager's amount of management experience and his management coordination and communication performance.

Specific hypothesis 65: There will be a positive relationship between a manager's amount of management experience and his management controlling performance.

Specific hypothesis 66: There will be a positive relationship between a manager's amount of farm work experience and his management general planning and decision making performance.

Specific hypothesis 67: There will be a positive relationship between a manager's amount of farm work experience and his management organizing and staffing performance.

Specific hypothesis 68: There will be a positive relationship between a manager's amount of farm work experience and his
management directing and leading performance.

**Specific hypothesis 69:** There will be a positive relationship between a manager's amount of farm work experience and his management coordination and communication performance.

**Specific hypothesis 70:** There will be a positive relationship between a manager's amount of farm work experience and his management controlling performance.

**Specific hypothesis 71:** There will be a positive relationship between a manager's years as the manager of the cooperative association and his management general planning and decision making performance.

**Specific hypothesis 72:** There will be a positive relationship between a manager's years as the manager of the cooperative association and his management organizing and staffing performance.

**Specific hypothesis 73:** There will be a positive relationship between a manager's years as the manager of the cooperative association and his management directing and leading performance.

**Specific hypothesis 74:** There will be a positive relationship between a manager's years as the manager of the cooperative association and his management coordination and communication performance.

**Specific hypothesis 75:** There will be a positive relationship between a manager's years as the manager of the cooperative association and his management controlling performance.
Level of knowledge

Level of knowledge in a specific area related to management is defined as the manager's technical competence in that area. This thesis is focused on manager's level of knowledge in three specific areas. These specific areas are:

(1) Manager's level of chemical knowledge.
(2) Manager's level of fertilizer knowledge.
(3) Manager's level of economic knowledge.

Chemical knowledge

Knowledge about agricultural chemicals is defined as the manager's knowledge about the principles of agricultural chemicals and their use in farming operations. This knowledge includes basic principles of weed control and basic principles of insect control. The manager should be familiar with this product line. Usually the members as well as non-members customers of the farmer cooperative expect the manager to be a relevant source of information in regard to agricultural chemicals. Therefore, it is assumed the higher the manager's level of chemical knowledge the higher will be his management performance. Thus the following hypotheses will be derived.

Specific hypothesis 76: There will be a positive relationship between a manager's level of chemical knowledge and his management general planning and decision making performance.

Specific hypothesis 77: There will be a positive relationship between a manager's level of chemical knowledge and his management organizing and staffing performance.

Specific hypothesis 78: There will be a positive relationship between a manager's level of chemical knowledge and his
management directing and leading performance.

Specific hypothesis 79: There will be a positive relationship between a manager's level of chemical knowledge and his management coordination and communication performance.

Specific hypothesis 80: There will be a positive relationship between a manager's level of chemical knowledge and his management controlling performance.

Fertilizer knowledge. Knowledge of fertilizer is defined as manager's knowledge of the agronomic and economic principles of fertilizer and fertilizer use in farming operations and his knowledge of the fertilizer industry as it pertains to his business operations. Past research shows farmers expect fertilizer dealers to be a source of information and recommendations about fertilizer and fertilizer use. Therefore, the manager, as a fertilizer dealer, needs a thorough knowledge of fertilizer in order to adequately provide accurate information and make recommendations to farmer customers. Thus the following specific hypotheses will be derived.

Specific hypothesis 81: There will be a positive relationship between a manager's level of fertilizer knowledge and his management general planning and decision making performance.

Specific hypothesis 82: There will be a positive relationship between a manager's level of fertilizer knowledge and his management organizing and staffing performance.

Specific hypothesis 83: There will be a positive relationship between a manager's level of fertilizer knowledge and his management directing and leading performance.
**Specific hypothesis 84:** There will be a positive relationship between a manager's level of fertilizer knowledge and his management coordination and communication performance.

**Specific hypothesis 85:** There will be a positive relationship between a manager's level of fertilizer knowledge and his management controlling performance.

**Economic knowledge**  
Economic knowledge is defined in terms of:

1. Finance knowledge
2. Knowledge about money value
3. Knowledge about profit building
4. Knowledge about margin determination.

Each of the above dimensions of economic knowledge have been considered vital to business management.

**Finance knowledge**  
Finance knowledge is defined as knowledge about economic basis of financing the business. It involves the determination of where to use funds in the cooperative association.

**Knowledge about money value**  
Knowledge about money value is defined as the manager's knowledge about the present purchasing power of money and its future purchasing power, this should help him in making accurate financing decisions which in turn should increase the efficiency of the business.

**Knowledge about profit building**  
Knowledge about profit building is defined as the manager's level of knowledge of business economic principles and techniques of profit building such as economics of agricultural marketing, production economics, etc.

**Knowledge about margin determination**  
Under the assumption
of profit maximization, it is assumed that the manager would have some rational means of deciding the margin they take on specific commodity lines and how this margin may be related to sales volume of the specific commodity and related commodities. The determination of margins is an area of responsibility for the manager.

It is expected the more economic knowledge the manager has the better will be his performance as a manager. Thus the relationship is expected to be positive. Statements of the hypothesized relationships between the above defined dimensions of economic knowledge and manager's performance will be developed in the following part of this section.

**Specific hypothesis 86:** There will be a positive relationship between a manager's level of finance knowledge and his management general planning and decision making performance.

**Specific hypothesis 87:** There will be a positive relationship between a manager's level of finance knowledge and his management organizing and staffing performance.

**Specific hypothesis 88:** There will be a positive relationship between a manager's level of finance knowledge and his management directing and leading performance.

**Specific hypothesis 89:** There will be a positive relationship between a manager's level of finance knowledge and his management coordination and communication performance.

**Specific hypothesis 90:** There will be a positive relationship between a manager's level of finance knowledge and his management controlling performance.

**Specific hypothesis 91:** There will be a positive relationship
between a manager's level of knowledge about money value and
his management general planning and decision making per­
formance.

Specific hypothesis 92: There will be a positive relationship
between a manager's level of knowledge about money value and
his management organizing and staffing performance.

Specific hypothesis 93: There will be a positive relationship
between a manager's level of knowledge about money value and
his management directing and leading performance.

Specific hypothesis 94: There will be a positive relationship
between a manager's level of knowledge about money value and
his management coordination and communication performance.

Specific hypothesis 95: There will be a positive relationship
between a manager's level of knowledge about money value and
his management controlling performance.

Specific hypothesis 96: There will be a positive relationship
between a manager's level of knowledge about profit building
and his management general planning and decision making
performance.

Specific hypothesis 97: There will be a positive relationship
between a manager's level of knowledge about profit building
and his management organizing and staffing performance.

Specific hypothesis 98: There will be a positive relationship
between a manager's level of knowledge about profit building
and his management directing and leading performance.

Specific hypothesis 99: There will be a positive relationship
between a manager's level of knowledge about profit building and his management coordination and communication performance.

**Specific hypothesis 100:** There will be a positive relationship between a manager's level of knowledge about profit building and his management controlling performance.

**Specific hypothesis 101:** There will be a positive relationship between a manager's level of knowledge about margin determination and his management general planning and decision making performance.

**Specific hypothesis 102:** There will be a positive relationship between a manager's level of knowledge about margin determination and his management organizing and staffing performance.

**Specific hypothesis 103:** There will be a positive relationship between a manager's level of knowledge about margin determination and his management directing and leading performance.

**Specific hypothesis 104:** There will be a positive relationship between a manager's level of knowledge about margin determination and his management coordination and communication performance.

**Specific hypothesis 105:** There will be a positive relationship between a manager's level of knowledge about margin determination and his management controlling performance.

A summary of the hypothesized relationships between a manager's knowledge variables and his management performance is presented in Figure 6.
Figure 6. Hypothesized relationships between knowledge variables and types of management behavior.
Job Satisfaction

As stated before the term satisfaction refers to a state of mind of a person. Satisfaction emerges from an individual's feelings and thoughts. Thus one should expect to find some relationship between a person's internal state of satisfaction and his behavior.

Job satisfaction is defined as the degree to which an individual is satisfied with rewards accruing to him from the performance of his role.

Based on the previous theoretical discussion and logical derivation the following hypotheses are derived.

**General hypothesis 3**: There will be a relationship between a manager's job satisfaction and his management behavior.

As stated before there are five types of management behavior. Thus the following specific hypotheses are derived.

**Specific hypothesis 106**: There will be a positive relationship between a manager's job satisfaction and his management general planning and decision making performance.

**Specific hypothesis 107**: There will be a positive relationship between a manager's job satisfaction and his management organizing and staffing performance.

**Specific hypothesis 108**: There will be a positive relationship between a manager's job satisfaction and his management directing and leading performance.

**Specific hypothesis 109**: There will be a positive relationship between a manager's job satisfaction and his management coordination and communication performance.
Specific hypothesis 110: There will be a positive relationship between a manager's job satisfaction and his management controlling performance.

A summary of the hypothesized relationships between a manager's job satisfaction and types of management behavior is presented in Figure 7.

Situational Variables

As stated before situational variables is an important group or cluster of variables which have some affect on the individual behavior or action. This thesis, as previously stated, deals only with two types of situational variables. These situational variables are sources of information and competition. From the previous theoretical discussion and past research it is derived that sources of information should have some affect on the individual knowledge and in turn on his behavior. Also, his perception of competition in the situation should affect his course of action. Thus hypotheses pertaining to the relationships between the two groups of situational variables and management behavior will be derived.

General Hypothesis 4: There will be a relationship between a manager's sources of information and his management behavior.

There are two types of sources of information used in this study. The two types are sources of management information and sources of products information.
Figure 7. Hypothesized relationships between job satisfaction and types of management behavior
Sources of management information

Sources of management information are defined as those sources of information which provide the manager with information about modern management and its methods.

Sources of products information

Sources of products information are defined as those sources of information which provide the manager with information about products in the market and their uses.

Since there are five types of management behavior, the following specific hypotheses are derived.

Specific hypothesis 111: There will be a positive relationship between a manager's number of sources of management information and his management general planning and decision making performance.

Specific hypothesis 112: There will be a positive relationship between a manager's number of sources of management information and his management organizing and staffing performance.

Specific hypothesis 113: There will be a positive relationship between a manager's number of sources of management information and his management directing and leading performance.

Specific hypothesis 114: There will be a positive relationship between a manager's number of sources of management information and his management coordination and communication performance.

Specific hypothesis 115: There will be a positive relationship between a manager's number of sources of management informa-
tion and his management controlling performance.

Specific hypothesis 116: There will be a positive relationship between a manager's number of sources of products information and his management general planning and decision making performance.

Specific hypothesis 117: There will be a positive relationship between a manager's number of sources of products information and his management organizing and staffing performance.

Specific hypothesis 118: There will be a positive relationship between a manager's number of sources of products information and his management directing and leading performance.

Specific hypothesis 119: There will be a positive relationship between a manager's number of sources of products information and his management coordination and communication performance.

Specific hypothesis 120: There will be a positive relationship between a manager's number of sources of products information and his management controlling performance.

Another environmental or situational factor which could be closely related to management performance is the competitive situation in which the association operates.

The total demand facing the association is restricted by the size of the market areas serviced by the association. Moreover, the individual association share of this total market further may depend on the number, location, and aggressiveness of the competitors operating in the market. Based on previous theoretical presentation and the above discussion, one might expect competition to be related to management behavior.
**General hypothesis 5:** There will be a relationship between competition in the market areas serviced by the association and the managers of the association management behavior. Since there are five types of management behavior the following sub-general hypotheses could be derived.

**Sub-general hypothesis 11:** There will be a relationship between competition in the market areas serviced by the association and the managers of the association management general planning and decision making performance.

**Sub-general hypothesis 12:** There will be a relationship between competition in the market areas serviced by the association and the managers of the association management organizing and staffing performance.

**Sub-general hypothesis 13:** There will be a relationship between competition in the market areas serviced by the association and the managers of the association management directing and leading performance.

**Sub-general hypothesis 14:** There will be a relationship between competition in the market areas serviced by the association and the managers of the association management coordination and communication performance.

**Sub-general hypothesis 15:** There will be a relationship between competition in the market areas serviced by the association and the managers of the association management controlling performance.

For the purposes of this study competition variables have been
categorized into four categories. These categories are as follows:

(1) Number of similar businesses.

(2) Competition rate.

(3) The restrictions of the competitive situation.

(4) Success in competition.

Number of similar businesses

Number of similar businesses with similar major product lines operating in the trade area should affect the market in the trade area. They will be competing for the market with a given association, this should in turn put pressure on the manager to manage well and affect his behavior in general and management processes in particular. Thus one might expect the number of similar businesses in the trade area to be positively related to management performance.

Specific hypothesis 121: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the managers of the association management general planning and decision making performance.

Specific hypothesis 122: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the managers of the association management organizing and staffing performance.

Specific hypothesis 123: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the managers of the association
management directing and leading performance.

Specific hypothesis 124: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the managers of the association management coordination and communication performance.

Specific hypothesis 125: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the managers of the association management controlling performance.

Competition rate

Competition rate is defined as the rate of interaction which involves a struggle for goals, which are scarce or are believed to be scarce, as perceived by the manager. Thus one might expect competition rate as perceived by the manager of an association to be positively related to his management performance.

Specific hypothesis 126: There will be a positive relationship between a manager's perception of competition rate and his management general planning and decision making performance.

Specific hypothesis 127: There will be a positive relationship between a manager's perception of competition rate and his management organizing and staffing performance.

Specific hypothesis 128: There will be a positive relationship between a manager's perception of competition rate and his management directing and leading performance.

Specific hypothesis 129: There will be a positive relationship
between a manager's perception of competition rate and his management coordination and communication performance.

**Specific hypothesis 130**: There will be a positive relationship between a manager's perception of competition rate and his management controlling performance.

The restrictions of the competitive situation

Restrictions of the competitive situation is the degree to which competition, as perceived by the manager, impose restrictions on the ability of the manager to be successful. Thus one might expect the restrictions of the competitive situation to be positively related to management performance based on the assumption that as the restrictions of the competitive situation gets higher the manager tends to improve his management performance so the association could compete in the competitive situation.

Based on the previous theoretical discussion and the above presentation the following specific hypotheses are derived.

**Specific hypothesis 131**: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation and his management general planning and decision making performance.

**Specific hypothesis 132**: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation and his management organizing and staffing performance.

**Specific hypothesis 133**: There will be a positive relationship
between a manager's perception of the restrictions of the competitive situation and his management directing and leading performance.

Specific hypothesis 134: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation and his management coordination and communication performance.

Specific hypothesis 135: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation and his management controlling performance.

Success in competition

Success in competition is the degree of a manager's perception of his association success in the competitive situation. One might expect success in competition to be positively related to management performance, based on the assumption that a manager's perception of success will motivate him to improve his management performance which in turn will partially lead to his association success. Thus the following hypotheses are developed.

Specific hypothesis 136: There will be a positive relationship between a manager's perception of success in competition and his management general planning and decision making performance.

Specific hypothesis 137: There will be a positive relationship between a manager's perception of success in competition and his management organizing and staffing performance.
Specific hypothesis 138: There will be a positive relationship between a manager's perception of success in competition and his management directing and leading performance.

Specific hypothesis 139: There will be a positive relationship between a manager's perception of success in competition and his management coordination and communication performance.

Specific hypothesis 140: There will be a positive relationship between a manager's perception of success in competition and his management controlling performance.

A summary of the hypothesized relationships between the situational variables and types of management behavior is presented in Figure 8.

Output of Behavior Practices

Management, as previously stated, is more important today than it has been in the past due to the large and complex systems of business organizations as well as market systems. It is one of the most important limiting factors in the process of growth and expansion of business enterprises in the United States. Management behavior is focused on the proper allocation of resources of the association and increase in its efficiency and performance. Thus one might derive that management behavior (or management behavior practices) will be related to the efficiency of the firm and/or the association and in turn to its economic performance and/or success. Thus the following hypotheses could be derived.

General hypothesis 6: There will be a relationship between a manager's management behavior practices and the efficiency
Figure 8. Hypothesized relationships between the situational variables and types of management behavior
of the business firm or association.

Since this study is focused on farmer cooperatives with relatively high volume of fertilizer sales*, it is perceived that the amount of fertilizer sales could be used as an indicator of the efficiency of the association and the degree of service rendered by the association to its clients. Thus one might expect the higher the manager's management performance the higher will be the amount of fertilizer sales of the cooperative due to the better functioning of the association. Thus one might expect the above relation to be positive. On the basis of the theoretical discussion and the above presentation the following hypotheses are developed.

Specific hypothesis 141: There will be a positive relationship between a manager's management general planning and decision making performance and amount of fertilizer sales of the farmer cooperative association.

Specific hypothesis 142: There will be a positive relationship between a manager's management organizing and staffing performance and amount of fertilizer sales of the farmer cooperative association.

Specific hypothesis 143: There will be a positive relationship between a manager's management directing and leading performance and amount of fertilizer sales of the farmer cooperative association.

*Cooperatives used in this study and amount of fertilizer sales will be discussed in more detail in the Methodology chapter. It is recognized that the amount of fertilizer sales is not the best measure of efficiency, however, it has been used as an indicator of efficiency in this case due to the limitations of this study.
cooperative association.

**Specific hypothesis 144**: There will be a positive relationship between a manager's management coordination and communication performance and amount of fertilizer sales of the farmer cooperative association.

**Specific hypothesis 145**: There will be a positive relationship between a manager's management controlling performance and amount of fertilizer sales of the farmer cooperative association.

Cost per dollar sales is quite often used by managers and top executives to evaluate the efficiency of the firm or the association. One might expect that effective management will decrease the cost per dollar of sales of the association. Also one might expect the higher the manager's management performance the more efficient the association and in turn the cost per dollar will decrease. Thus one might expect a negative relationship between management performance and cost per dollar sales. Based on previous theoretical discussion and the above presentation the following hypotheses were developed.

**Specific hypothesis 146**: There will be a negative relationship between a manager's management general planning and decision making performance and cost per dollar sales in the farmer cooperative association.

**Specific hypothesis 147**: There will be a negative relationship between a manager's management organizing and staffing performance and cost per dollar sales in the farmer cooperative association.
Specific hypothesis 148: There will be a negative relationship between a manager's management directing and leading performance and cost per dollar sales in the farmer cooperative association.

Specific hypothesis 149: There will be a negative relationship between a manager's management coordination and communication performance and cost per dollar sales in the farmer cooperative association.

Specific hypothesis 150: There will be a negative relationship between a manager's management controlling performance and cost per dollar sales in the farmer cooperative association.

As stated before increasing the efficiency of the firm or the association through management behavior practices should bring relative economic success. Since this study is focused on management behavior in the farmer cooperative association it is more logical to use average net operating revenue* as an indicator of relative economic success in the farmer cooperative association. In summary, management behavior practices are expected to increase the efficiency of the association and in turn relative economic success of the farmer cooperative association. Thus the following hypotheses are derived.

General hypothesis 7: There will be a relationship between a

*The author is aware that there are other variables which could be used as indicators for economic success in the farmer cooperative association. However, the above presentation has been bounded by the available data.
manager's management behavior practices and relative economic success of the business firm or association.

Specific hypothesis 151: There will be a positive relationship between a manager's management general planning and decision making performance and average net operating revenue of the farmer cooperative association.

Specific hypothesis 152: There will be a positive relationship between a manager's management organizing and staffing performance and average net operating revenue of the farmer cooperative association.

Specific hypothesis 153: There will be a positive relationship between a manager's management directing and leading performance and average net operating revenue of the farmer cooperative association.

Specific hypothesis 154: There will be a positive relationship between a manager's management coordination and communication performance and average net operating revenue of the farmer cooperative association.

Specific hypothesis 155: There will be a positive relationship between a manager's management controlling performance and average net operating revenue of the farmer cooperative association.

A summary of the above hypothesized relationships is presented in Figure 9.
Figure 9. Hypothesized relationships between types of management behavior and output of behavior practices and relative economic success of the farmer cooperative association.
All of the preceding hypotheses have been stated as first order relationships. However, one of the major objectives of this study, as previously stated, is to develop an overall analytical model for human behavior in general and management behavior in particular. This model will be used as an instrument for predicting human behavior, the output of human behavior practices and the consequences of the output of human behavior practices. The elements of the model are considered to be parts of an interactive system, each having an identifiable affect, but having their influence in combination with the other elements. Thus the following hypotheses are derived.

**General hypothesis 8:** There will be a relationship between a manager's selected personal variables, selected situational variables and his management behavior.

**General hypothesis 9:** There will be a relationship between a manager's selected personal variables, selected situational variables, his management behavior practices (performance) and the efficiency of the association which he manages.

**General hypothesis 10:** There will be a relationship between a manager's selected individual characteristics, selected situational variables, his management behavior practices (performance), the efficiency of the association which he manages and the economic success and/or performance of that association.

*General hypothesis 10 is a verbal expression of Equation 11 of the analytical model presented in the Theoretical Orientations chapter.*
METHODOLOGY

The focus of discussion in this chapter will be threefold. First, the methods, procedures, and instruments used in the collection of the data will be described. Second, empirical measures will be developed for each concept used in the derivation of the hypotheses. And third, methods used in the analysis of the data will be presented. The empirical hypotheses using the measures developed in this chapter will be stated in the Findings chapter as will the results of the statistical tests.

Data Collection

Sample selection and characteristics

The respondents for this study were a sample of general managers of Iowa farmer cooperatives randomly selected from a list comprising the entire population. The population list was compiled from two sources. The 1965 directory of the Farmers Grain Dealers Association provided the basic listing of cooperatives which included the major product lines handled by each business as well as the name of the present manager. This list was supplemented from the records of the Iowa Institute of Cooperation. Much overlap was found and it was decided that not enough business would be added to warrant the time and expense needed to check independent dealerships of the major regional cooperatives in Iowa. It should be noted that all branches of individual cooperatives were

*The above description of the sample has been taken from Himes (40).
excluded. In addition to the theoretical problems created by their inclusion, measures would have had to be developed to determine the increased restrictions under which the branch managers operate and thus compensate for this variance.

Because of the background of this project and the position of previous research it was decided that the cooperatives included in this study would have to sell fertilizer as one of their product lines. The above procedure, using the available records, resulted in a list of 342 dealerships, nearly all of which were selling some fertilizer. A criterion volume level of $15,000.00 of fertilizer sold during the last completed fiscal year for each business was set as the acceptable level. Letters were sent to each manager requesting an estimation of the size of his fertilizer department during his last completed fiscal year. Six categories were presented to the manager which were subsequently dichotomized into groups over and under the criterion level. Of 342 letters sent, 281 or an 82.5% response was received. The response to a reminder letter brought the total response to 332 or 97.1% including one response with inadequate information. The eleven remaining dealerships were phoned. The above procedure netted a usable population of 305 managers of cooperatives in Iowa.

A second criterion was used in drawing a sample from the population of general managers. In order that economic measures would reflect the policies and practices of each respondent, it was felt that each manager should be required to have held his present position for at least one fiscal year. Due to the varying fiscal years among the businesses, a minimum period of eighteen months was settled upon as the second
criterion. The population was reduced by about 20\% and a random selection of 100 managers and a substitute list was then finalized. During interviewing of the sample four substitutes were used for two managers who refused and two who did not meet the second criterion. Subsequent delays during the last stages of interviewing wherein schedules were not immediately forthcoming and at a time when substitutions could not be made reduced the sample size for the initial analysis to 91. The analysis of the attitude data was performed on these 91 respondents. During the time required to analyze the attitude data and to prepare the other variables for analysis seven additional schedules were completed and returned. All other variables were thus analyzed on 98 respondents. Data from the seven schedules were added to the attitudinal data and the final correlation analysis and regression analysis were performed on 98 respondents. Some characteristics of the sample are summarized in Table 4. The range on each of the variables is considerable, however, the limitations and possible sample bias introduced by the sampling procedure should be kept in mind.

Field instruments and procedures

The data were collected for the pretest of this study during the months of July and August of 1966. The procedures employed were those of the survey technique using both an interview schedule and a questionnaire. The interviewing was carried out in three phases in order to minimize the amount of time asked of a respondent at any one time. The interviewing was carried out by graduate students and trained interviewers.
Table 4. Characteristics of the sample\(^a\)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Sample</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Average</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>Age of the manager 1966</td>
<td>29-68</td>
<td>45.32</td>
<td>10.26</td>
</tr>
<tr>
<td>Education of the manager</td>
<td>8-16</td>
<td>12.70</td>
<td>1.85</td>
</tr>
<tr>
<td>Years of vocational agriculture</td>
<td>0-6</td>
<td>2.23</td>
<td>1.68</td>
</tr>
<tr>
<td>Management experience</td>
<td>3-48</td>
<td>15.68</td>
<td>9.75</td>
</tr>
<tr>
<td>Management training</td>
<td>0-7</td>
<td>2.51</td>
<td>1.94</td>
</tr>
<tr>
<td>Years as manager in present position</td>
<td>2-39</td>
<td>11.77</td>
<td>8.01</td>
</tr>
<tr>
<td>Number of employees</td>
<td>2-60</td>
<td>13.05</td>
<td>11.14</td>
</tr>
<tr>
<td>Average net commodity Sales 1964-1965</td>
<td>$226,000-</td>
<td>$1,796,500</td>
<td>$1,458,800</td>
</tr>
<tr>
<td></td>
<td>$10,869,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average net operating profit 1964-1965</td>
<td>$22,130-</td>
<td>$40,440</td>
<td>$50,930</td>
</tr>
<tr>
<td></td>
<td>$251,660</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)\(n = 98\).
The project was undertaken in conjunction with the department of Agricultural Economics at Iowa State University in close cooperation with Dr. C. Philip Baume. The financial data of concern were gathered as part of the first interview schedule. This schedule also pertained to goals the manager may have in the operation of his business. Upon the completion of the schedule, the respondents were given the questionnaire to fill out and return by mail. The respondent was given the instructions for responding to the items and was told that a second interviewer would arrive in several days to pick up the questionnaire if it had not yet been mailed and to administer the second schedule to complete the interviewing process. The second phase of the interview was the completion of the questionnaire which contained various personality instruments including 161 attitude statements. The third phase consisted of the administration of the second schedule. Included in the second schedule were questions relating to the respondent's performance of his job, job satisfaction, perceptions of his social environment, and personal data.

The questionnaire of phase two and the schedule of phase three were developed by the project leaders, Drs. George M. Beal, Joe M. Bohlen, and Richard D. Warren, with the assistance of graduate assistants Dan Himes and David Duncan. The pretest was conceived as an exploratory study and thus as the means for making more concise the somewhat lengthy schedule and questionnaire. The development of the specific scales and indices of concern in this analysis will be discussed in the following section.
Concept Operationalization

The discussion in this section will focus on the means whereby the empirical measures of each of the concepts used was developed.

In the attempt to test a theoretical hypothesis with empirical data, one of the most critical problems is that of establishing the necessary relationship between the empirical measure and the thing measured (the concept) (40). The type of validity that will be employed in this study will emphasize the logical aspect of validity assumed by the terms construct or internal validity or epistemic correlation (40). Epistemic correlation is the degree to which the indicator corresponds to the theoretical definition (93).

Management behavior measures

Having developed the typology of management behavior in the theoretical orientations section the discussion will focus here on the measurements of those behavioral types. In this section the task is to measure the actual behavior of the manager on each of the previously mentioned types. To measure the actual behavior (performance) of the manager on each of the types (functions) of management scale or index has been constructed. A total of four scales and one index have been constructed. The procedure will be adopted here is to discuss the overall procedure and criteria used in establishing these scales and/or indicies and then present each scale or index and discuss it separately. The general procedure followed is based upon the work of Edwards (26), Himes (40), Warland (93), Hobbs (41), and with specific guidance being provided by the comments and suggestions of Dr. Richard Warren, Department
of Statistics, Iowa State University.

The initial step of scale or index construction consisted of the preparation of a set of questions or items which were believed to reflect the range of management behavior types under consideration. The source of the initial set of questions and its possible responses included conceptual derivations from previous research, inferences from the literature, and suggestions of the project leaders. The number of questions developed for each scale or index depended primarily upon the scope of the general management function involved.

This group of questions was administered to a sample of 98 managers of Iowa farmer cooperatives. To obtain these data, the managers were asked to respond to each question.

After the collection of these data, the questions or the items were arranged by three judges\(^1\) into the five previously constructed types of management behavior for easy reference. Each individual response was scored and coded in preparation for analysis on standard IBM equipment. Two methods of scoring have been used in transforming the data into a form acceptable to statistical analysis. First, by grouping the responses into categories and score them on the basis of the theoretical definition of each type of management behavior and the degree of their closeness to the definition. For example the following question has been asked.

\[^{1}\text{The judges were Drs. George M. Beal and Richard D. Warren of the Department of Sociology, Iowa State University and the author.}\]
What type of job descriptions do you have for each employee position in your business?

The responses to this question were grouped and coded as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do not write job descriptions</td>
</tr>
<tr>
<td>2</td>
<td>Have verbal job descriptions for all employees</td>
</tr>
<tr>
<td>3</td>
<td>Have written job descriptions for supervisory employees only</td>
</tr>
<tr>
<td>4</td>
<td>Have written job descriptions for all employees</td>
</tr>
</tbody>
</table>

It is perceived that the last category is the most appropriate one; thus the highest score has been assigned to it. In some other cases where the response is yes or no, an arbitrary assignment of score 1 to a No response and score 2 to a Yes response has been used. Second, scoring by using the certainty method as described by Himes (40). For each of 98 responses to each question, several judges were asked to indicate their feelings on the adequacy of the response in leading to successful performance of the previously specified functions. The complete set of instructions for one question used in the analysis follows:

On the following pages are the responses made by general managers of Iowa Farmer Cooperatives to the question: "What are the major factors you take into consideration in deciding (or in making recommendations to your board) to add or to drop existing lines of business or reorganizing your business to place greater emphasis on a given line?"

It is assumed that you have or will formulate a standard of managerial performance which would enable you to differ-
entiate adequate performance from inadequate performance. The adequacy of performance is to be considered in terms of its leading to successful decision making regarding adding, dropping, or reorganizing existing lines of the business. Read the response of each manager and from a judgment as to whether his methods and techniques (his performance) in this area are adequate or inadequate. Compare your judgment for each general manager with your standard. If you believe that the response given by the manager indicates his procedures most certainly would lead to highly adequate performance of the function indicated by the question, place a 99 by the individual's response. On the other hand, if you believe that the response given by the manager indicates his procedures most certainly would lead to highly inadequate performance of the function indicated, place a 1 by the individual's response. The continuum with which you are working is one of certainty. The more certain you are that a response indicates a manager's procedures are on the adequate performance side of the midpoint (50), the greater the number you assign to the response. The more certain you are a response indicates a manager's procedures are on the inadequate performance side of the midpoint, the smaller the number you assign to the response. A score of 50 indicates you cannot decide. Feel free to use any number from 1 to 99 that best expresses your belief.
Responses to each question were presented to the judges in a completely random order to prevent response set and to insure anonymity. The theoretical basis of the method suggests the proper transformation of the scores to be that of the normal deviate (Z). In this case 99 was coded as +2.326, 75 as +0.674, 50 as 0.000, 25 as -0.674, and 01 as -2.326 (20). The mean was then determined for each respondent on each question from the coded scores. The averaged scores are the data used in the analysis of the items and the development of the scales and the indices. The certainty method was selected for use on a part of these data because of the applicability of some of the questions to certainty scoring and its maximum use of the available data.

In developing management behavior scales and/or indices, it should be pointed out that an objective in scale development is the development of unidimensional scales or dimensions.

In this study it is recognized that theory cannot alone be accurate enough to define and construct a scale; it can only suggest relationships which must be empirically verified. Also with the same approach past research or empirical evidence cannot alone be accurate enough to define and construct a scale. Thus a combined approach of theory, past research and empirical evidence from the data was used in this study in
the construction of scales and indicies.

When the study was completed, the five dimensions were rechecked for unidimensionality, reliability and additivity. Wolins and Cranny, as cited by Warland (93), have suggested three conditions which are necessary and operationally definable to add items legitimately. These criteria were used to evaluate the final scale items (questions) in terms of additivity, unidimensionality, and reliability. The criteria used include the following:

1. The relationships among the responses to the different stimuli (items) must be linear.
2. The variance of the responses to different stimuli must be homogeneous and independent of the means.
3. The intercorrelations among the stimuli must be positive and homogeneous.

Many studies in the past have evaluated items on the basis of item-total correlations, split-plot reliability, etc. However, these means of evaluation only consider the first of the three conditions for additivity. An examination of the items with respect to the other two conditions should provide much more information concerning the relative additivity of the dimensions. Although no set of operations are available to evaluate all these criteria in any absolute sense, the characteristics of the scales can be summarized and compared in a relative sense.

To evaluate the items with respect to the three conditions of additivity, it is necessary to establish some criteria. These criteria will establish a basis upon which the scales can be compared to one another. The first condition for additivity will be evaluated on the basis of:
(1) a comparison between the minimum acceptable item-total correlation coefficient \( r_{it} \) and the field sample \( r_{it} \)'s of each scale,

(2) the magnitude of the coefficient of reliability \( r_{tt} \),

(3) the magnitude of the average intercorrelation coefficient \( r_{ij} \), and

(4) the magnitude of a majority of the intercorrelations among the items of each scale.

The minimum item total correlation is defined as \( r_{it} = 1/\sqrt{n} \) where \( n \) is the number of items in the given dimension. The minimum item-total correlation coefficient \( r_{it} \) may serve as a quasi significance test of linearity. This coefficient defines the amount of independent variance of the total score contributed by each item if there were no experimental relationship, i.e., the amount of variance which is contributed only by chance (93).

The coefficient of reliability is defined as

\[
 r_{tt} = \frac{n\overline{r}}{1 + (n - 1)\overline{r}}
\]

where \( n \) = the number of items and \( \overline{r} \) is the average intercorrelation among the items.

The magnitude of the intercorrelation coefficients (criterion 4) will be evaluated on the basis of the following arbitrary categories:

1. If approximately 60 per cent of the intercorrelation coefficients have values of .19 and below, they will be declared as having a "very low magnitude."
2. If approximately 60 per cent of the intercorrelation coefficients have values of .29 and below, they will be declared as having a "low magnitude."

3. If approximately 60 per cent of the intercorrelation coefficients have values of .30 and above, they will be declared as having a "moderate magnitude."

4. If approximately 60 per cent of the intercorrelation coefficients have values of .50 and above, they will be declared as having a "moderately high magnitude."

The second condition will be evaluated on the basis of an inspection of:

1. the pattern of relationships between the item means and item standard deviations and
2. the range of the item standard deviations.

If the means and the standard deviations appear to be unrelated, the means and standard deviations will be declared as "relatively independent." If there appears to be some pattern to the relationship between the means and standard deviations, it will be noted.

Warland (93) pointed out that the data concerning the relationship between the item means and item standard deviations can not be very meaningfully evaluated when the number of items of the scale is small. With only a few items, there is not enough data to determine accurately the nature of the relationship between the item means and item standard deviations. Since all the scales discussed here have less than ten items, the evaluation of the relationship between the item means and item standard deviation should be considered to be rather tenuous. In
light of this fact, the major purposes of this analysis will be to illustrate a general procedure which can be used to evaluate additivity and determine the general pattern of relationships between these item means and standard deviations.

The third condition will be evaluated on the basis of an examination of the intercorrelations among the items (93). This criterion will be evaluated on the basis of the following arbitrary categories:

1. If approximately 60 per cent of the intercorrelation coefficients are contracted within a range of two adjacent categories (e.g., .10 to .19 and .20 to .29), these coefficients will be declared as being concentrated in a "relatively narrow range."

2. If approximately 60 per cent of the intercorrelation coefficients are concentrated within a range of three adjacent categories, these coefficients will be declared as being concentrated in a "moderately narrow range."

3. If approximately 60 per cent of the intercorrelation coefficients are concentrated within a range of four adjacent categories, these coefficients will be declared as being concentrated in a "moderate range."

Each scale or index will now be discussed with respect to each of these various criteria.

General planning and decision making scale The general planning and decision making scale was constructed to measure the manager's actual behavior or performance on general planning and decision making
function of management. This scale was constructed by the methods and procedures outlined in the preceding section of this dissertation. A list of the performance questions which were used in building this scale is presented in Appendix A.

Data relevant to the final items (questions) in the general planning and decision making scale appear in Table 5. The means and standard deviations of the items (questions responses) appear to be relatively independent. The item standard deviations cover a range of 0.094, from 0.158 to 0.252. The coefficient of internal consistency (reliability) for this scale is 0.7121.

Table 5. Data pertaining to the items of general planning and decision making scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Sample $\bar{X}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.114</td>
<td>0.216</td>
</tr>
<tr>
<td>2</td>
<td>0.235</td>
<td>0.197</td>
</tr>
<tr>
<td>3</td>
<td>0.082</td>
<td>0.252</td>
</tr>
<tr>
<td>4</td>
<td>0.244</td>
<td>0.247</td>
</tr>
<tr>
<td>5</td>
<td>0.221</td>
<td>0.213</td>
</tr>
<tr>
<td>6</td>
<td>0.219</td>
<td>0.165</td>
</tr>
<tr>
<td>7</td>
<td>0.284</td>
<td>0.158</td>
</tr>
<tr>
<td>8</td>
<td>0.143</td>
<td>0.172</td>
</tr>
</tbody>
</table>

By examining the item intercorrelations which are presented in Table 6, one might find that they are concentrated in a relatively narrow
Table 6. General planning and decision making item intercorrelations and item-total correlations$^a,b$

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Total$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0.2475</td>
<td>0.0823</td>
<td>0.1433</td>
<td>0.2522</td>
<td>-0.0271</td>
<td>0.3014</td>
<td>0.1455</td>
<td>0.4778</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>0.1529</td>
<td>0.3666</td>
<td>0.0825</td>
<td>0.2152</td>
<td>0.2000</td>
<td>0.3256</td>
<td>0.5658</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>0.1574</td>
<td>0.3699</td>
<td>0.4433</td>
<td>0.2778</td>
<td>0.2278</td>
<td>0.6166</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td></td>
<td>0.2453</td>
<td>0.3729</td>
<td>0.2230</td>
<td>0.1701</td>
<td>0.6073</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td></td>
<td></td>
<td>0.2348</td>
<td>0.3381</td>
<td>0.1432</td>
<td>0.5972</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>0.2228</td>
<td>0.2683</td>
<td>0.5772</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.3773</td>
<td>0.6003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5330</td>
</tr>
</tbody>
</table>

$^a$Reliability coefficient = $r_{tt} = 0.7121$.

$^b$The above table includes only the significant items which have been used in the final analysis.

$^c$Greater than the minimum acceptable item total correlation coefficient $r_{it}$. 
range, i.e., about 67 per cent of the intercorrelations fall between 0.10 and 0.29. The range of the intercorrelation coefficients is from -0.0271 to 0.4433.

The actual range of total scores on this scale is from -0.586 to 4.399 while the possible range is from -18.608 to 18.608. The mean total score is 1.5390 and the standard deviation is 0.9380. Distribution of scores on the general planning and decision making scale based upon the standard deviation is presented in Table 7. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale. It should be mentioned that score -18.608 indicates the lowest management general planning and decision making performance while 18.608 indicates the highest performance on the above scale.

Table 7. Distribution of scores on the general planning and decision making scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.600 and below</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>0.601 - 1.539</td>
<td>30</td>
<td>30.6</td>
</tr>
<tr>
<td>1.540 - 2.478</td>
<td>38</td>
<td>38.7</td>
</tr>
<tr>
<td>2.479 and above</td>
<td>13</td>
<td>13.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = -0.586 - 4.399

$\bar{X} = 1.539$

$s = 0.938$
Organizing and staffing scale  
The organizing and staffing scale was constructed to measure the manager actual behavior or performance on organizing and staffing function of management in management setting. The scale was constructed by the methods and procedures outlined in the preceding section of this dissertation. The performance questions, sometimes called items, of this scale could be found in Appendix A.

Data relevant to the final items (questions responses) in the organizing and staffing scale appears in Table 8. The means and standard deviations of the items appear to be relatively independent. The item standard deviations cover a range of 0.5822, from 0.1989 to 0.7811. The coefficient of internal consistency (reliability) for this scale is 0.6190.

Table 8. Data pertaining to the items of organizing and staffing scale

<table>
<thead>
<tr>
<th>Item number</th>
<th>Sample $\bar{X}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.009</td>
<td>0.2104</td>
</tr>
<tr>
<td>2</td>
<td>0.052</td>
<td>0.2030</td>
</tr>
<tr>
<td>3</td>
<td>0.027</td>
<td>0.1989</td>
</tr>
<tr>
<td>4</td>
<td>2.316</td>
<td>0.7811</td>
</tr>
</tbody>
</table>

The item intercorrelations and item-total correlations are presented in Table 9. The item intercorrelations are concentrated in a relatively narrow range. The range of the intercorrelation coefficients is from 0.1702 - 0.3316.
Table 9. Organizing and staffing item intercorrelations and item-total correlations\(^a,b\)

<table>
<thead>
<tr>
<th>Item number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0.3214</td>
<td>0.1702</td>
<td>0.3316</td>
<td>0.5429</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>0.3206</td>
<td>0.2586</td>
<td>0.5123</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>0.3306</td>
<td>0.5329</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.9255</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Reliability coefficient = \(r_{tt} = 0.6190\).

\(^b\)The above table includes only the significant items which have been used in the final analysis.

\(^c\)Greater than the minimum acceptable item total correlation coefficient \(r_{it}\).

The actual range of total scores on this scale is from 0.4100 to 5.3460 while the possible range is from -7.9780 to 10.9780. The mean total score is 2.404 and the standard deviation is 1.047. Distribution of scores on the organizing and staffing scale based upon the standard deviation is presented in Table 10. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale. It should be noted that the higher the manager performance in the desired direction the higher will be his score on the above mentioned scale.
Table 10. Distribution of scores on the organizing and staffing scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.356 and below</td>
<td>9</td>
<td>9.1</td>
</tr>
<tr>
<td>1.357 - 2.404</td>
<td>55</td>
<td>56.1</td>
</tr>
<tr>
<td>2.405 - 3.452</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>3.453 and above</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 0.410 - 5.346

X = 2.404

S = 1.047

Coordination and communication scale

The coordination and communication scale was constructed to measure the manager actual behavior or performance on coordination and communication function of management in management setting. The scale was constructed by the methods and procedures outlined in the preceding section. The items of this scale are presented in Appendix A.

Data relevant to the final scale items is presented in Table 11.

Table 11. Data pertaining to the items of coordination and communication scale

<table>
<thead>
<tr>
<th>Item number</th>
<th>Sample $\bar{X}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.6938</td>
<td>0.7238</td>
</tr>
<tr>
<td>2</td>
<td>-0.2205</td>
<td>0.4528</td>
</tr>
<tr>
<td>3</td>
<td>0.0840</td>
<td>0.1598</td>
</tr>
</tbody>
</table>
The means and standard deviations of the items appear to be relatively independent. The item standard deviations cover a range of 0.5640, from 0.1598 to 0.7238. The reliability coefficient for this scale is 0.4132. The item intercorrelations and item-total correlations are presented in Table 12. The range of the intercorrelation coefficients is from 0.1424 to 0.2248.

Table 12. Coordination and communication item intercorrelations\textsuperscript{a,b}

<table>
<thead>
<tr>
<th>Item number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total\textsuperscript{c}</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0.1424</td>
<td>0.2248</td>
<td>0.8148</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>-</td>
<td>0.2033</td>
<td>0.6025</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>-</td>
<td>0.4640</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Reliability coefficient = \( r_{tt} = 0.4132 \).

\textsuperscript{b}The above table includes only the significant items which have been used in the final analysis.

\textsuperscript{c}Greater than the minimum acceptable item total correlation coefficient \( r_{it} \).

The actual range of total scores on this scale is from 0.059 to 5.028 while the possible range is from -5.978 to 10.978. The mean total score is 3.557 and the standard deviation is 0.967. The distribution of scores on the coordination and communication scale based upon the standard deviation is presented in Table 13. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale. It should be mentioned that 10.978 on the above
scale indicates that a manager's management coordination and communication performance is highly acceptable and will lead to business success.

Table 13. Distribution of scores on the coordination and communication scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.589 and below</td>
<td>13</td>
<td>13.3</td>
</tr>
<tr>
<td>2.590 - 3.557</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>3.558 - 4.525</td>
<td>55</td>
<td>56.1</td>
</tr>
<tr>
<td>4.526 and above</td>
<td>6</td>
<td>6.1</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 0.059 - 5.028

\[ \bar{X} = 3.557 \]

\[ S = 0.967 \]

**Controlling scale**  The controlling scale was constructed to measure the manager actual behavior or performance on controlling function of management in management setting. This scale was constructed, like the other scales, by the methods and procedures outlined in the preceding section. The items of this scale is presented in Appendix A.

Data relevant to the final scale items is presented in Table 14. The means and standard deviations of the items appear to be relatively independent. The item standard deviations cover a range of 4.6394, from 0.4873 to 5.1267. The reliability coefficient for this scale is 0.9126.
Table 14. Data pertaining to the items of controlling scale

<table>
<thead>
<tr>
<th>Item number</th>
<th>Sample $\bar{X}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.5181</td>
<td>0.8817</td>
</tr>
<tr>
<td>2</td>
<td>1.3776</td>
<td>0.4873</td>
</tr>
<tr>
<td>3</td>
<td>3.3980</td>
<td>5.1267</td>
</tr>
</tbody>
</table>

The item intercorrelations and item-total correlations are presented in Table 15. The range of the intercorrelation coefficients is from 0.6725 to 0.8554.

Table 15. Controlling item intercorrelations and item-total correlations$^{a,b}$

<table>
<thead>
<tr>
<th>Item number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0.8029</td>
<td>0.6725</td>
<td>0.7649</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>-</td>
<td>0.8554</td>
<td>0.9008</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.9841</td>
</tr>
</tbody>
</table>

$^a$Reliability coefficient = $r_{t.t.} = 0.9126$.

$^b$The above table includes only the significant items which have been used in the final analysis.

$^c$Greater than the minimum acceptable item total correlation coefficient $r_{it}$.
The actual range of total scores on this scale is from -0.189 to 16.512 while the possible range is from -2.652 to 16.652. The mean total score is 4.2573 and the standard deviation is 6.1921. Distribution of scores on the controlling scale based upon the standard deviation is presented in Table 16. The mean and the distribution of the scores indicate that the majority of the managers scored near the lower end of the scale. The highest point on the scale is 12.652 which indicates the most acceptable controlling performance on the part of the manager.

Table 16. Distribution of scores on the controlling scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.9348 - 4.2573</td>
<td>64</td>
<td>65.3</td>
</tr>
<tr>
<td>4.2574 - 10.4494</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>10.4495 and above</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = -0.189 - 16.512

\[ \bar{X} = 4.2573 \]

\[ S = 6.1921 \]

**Directing and leading index** The directing and leading index was constructed to measure the manager actual behavior or performance on the directing and leading function of management in management setting. This index was constructed by the methods and procedures outlined in the preceding section. The items of this index are presented in Appendix A.
Data relevant to the final index items is presented in Table 17.

Table 17. Data pertaining to the items of directing and leading index

<table>
<thead>
<tr>
<th>Item number</th>
<th>Sample $\bar{X}$</th>
<th>Sample standard deviation</th>
<th>$r_{it}$ $^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.6939</td>
<td>0.4633</td>
<td>0.9306</td>
</tr>
<tr>
<td>2</td>
<td>2.9592</td>
<td>2.1962</td>
<td>0.9970</td>
</tr>
</tbody>
</table>

$a_{r_{it}}$ is the intercorrelation coefficient between the item and the items total.

The means and standard deviations of the items appear to be relatively independent. The item standard deviations cover a range of 1.7329, from 0.4633 to 2.1962. The reliability coefficient for this index is 0.9471. The item intercorrelations and item-total correlations are presented in Table 18. The range of the intercorrelation coefficients is from 0.8996 to 0.9970.

Table 18. Directing and leading item intercorrelations and item-total correlations$^a,b$

<table>
<thead>
<tr>
<th>Item number</th>
<th>1</th>
<th>2</th>
<th>Total$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0.8996</td>
<td>0.9306</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>-</td>
<td>0.9970</td>
</tr>
</tbody>
</table>

$^a$Reliability coefficient = $r_{tt} = 0.9471$.

$^b$The above table includes only the significant items which have been used in the final analysis.

$^c$Greater than the minimum acceptable item total correlation coefficient $r_{it}$.
The actual range of total scores on this index is from 1 to 7 which coincides with the possible range. The mean total score is 4.65 and the standard deviation is 2.62. Distribution of scores on the directing and leading index based upon the standard deviation is presented in Table 19. The mean and the distribution of the scores indicate that the majority of the managers scored near the higher end of the index.

Table 19. Distribution of scores on the directing and leading index

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.02 and below</td>
<td>31</td>
<td>31.6</td>
</tr>
<tr>
<td>2.03 - 4.65</td>
<td>7</td>
<td>7.2</td>
</tr>
<tr>
<td>4.66 and above</td>
<td>60</td>
<td>61.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 1 - 7
\[ \bar{x} = 4.65 \]
\[ S = 2.62 \]

Intercorrelation of management behavior scales and indices is presented in Table 20. It does show a relatively high degree of independence among the measures of management behavior types. A summary of the characteristics of management behavior scales and indices is also presented in Table 21.
<table>
<thead>
<tr>
<th></th>
<th>General planning and decision making</th>
<th>Organizing and staffing</th>
<th>Directing and leading</th>
<th>Coordination and communication</th>
<th>Controlling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General planning and decision making</td>
<td>---</td>
<td>0.3277</td>
<td>0.0658</td>
<td>0.2687</td>
<td>0.3132</td>
</tr>
<tr>
<td>2. Organizing and staffing</td>
<td>---</td>
<td>0.0186</td>
<td>0.3171</td>
<td></td>
<td>0.4126</td>
</tr>
<tr>
<td>3. Directing and leading&lt;sup&gt;a&lt;/sup&gt;</td>
<td>---</td>
<td></td>
<td>0.1328</td>
<td>0.2083</td>
<td></td>
</tr>
<tr>
<td>4. Coordination and communication</td>
<td>---</td>
<td></td>
<td></td>
<td>0.3191</td>
<td></td>
</tr>
<tr>
<td>5. Controlling</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>An index.
Table 21. Summary of the characteristics of management behavior scales and indices

<table>
<thead>
<tr>
<th>Scale or index</th>
<th>Number of items</th>
<th>$r_{tt}$</th>
<th>Range of $S$</th>
<th>Concentration of intercorrelations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General planning and decision making scale</td>
<td>8</td>
<td>0.7121</td>
<td>0.1580 - 0.2520</td>
<td>0.10 - 0.39</td>
</tr>
<tr>
<td>2. Organizing and staffing scale</td>
<td>4</td>
<td>0.6190</td>
<td>0.1989 - 0.7811</td>
<td>0.30 - 0.39</td>
</tr>
<tr>
<td>3. Directing and leading index</td>
<td>2</td>
<td>0.9471</td>
<td>0.4633 - 2.1962</td>
<td>----</td>
</tr>
<tr>
<td>4. Coordination and communication scale</td>
<td>3</td>
<td>0.4132</td>
<td>0.1598 - 0.7238</td>
<td>0.20 - 0.29</td>
</tr>
<tr>
<td>5. Controlling scale</td>
<td>3</td>
<td>0.9126</td>
<td>0.4873 - 5.1267</td>
<td>0.60 - 0.90</td>
</tr>
</tbody>
</table>

$a r_{tt} =$ reliability coefficient.

$b S =$ sample standard deviation.
Attitude measures*

Each of the attitude dimensions theoretically developed in the previous chapter will be operationalized by an attitude scale. Scales offer the advantages both of being more indirect in their approach to the respondent and of being more reliable than direct observation. Because of the complex nature of an attitude, a multi-item scale also increases the validity of the measure in relation to its defined dimension (40).

The initial step in the construction of the attitude scales consisted of the preparation of a number of statements, often referred to as items, which are believed to reflect the range of attitudes relevant to each of the conceptual dimensions defined above. These statements were derived from previous research, conceptual derivation in each dimension, inferences from the literature, and suggestions from several persons either directly or indirectly interested in the study. Each statement was constructed following the general criteria suggested by Edwards (26) and carefully edited several times in an attempt to insure communication with the members of the sample. An attempt was also made to construct statements which would cover the entire psychological continuum, including the area near the center where it has traditionally been difficult to retain items due to the inherent ambiguity of the area (26). This process led to the development of 270 items with a median of 25.5 statements for each scale.

*Attitude measures in this thesis are based on Himes (40) analysis.
Following the preparation of the statements, their place on the psychological continuum as it was defined had to be determined, and ambiguous and irrelevant items eliminated. This phase was executed by submitting the statements to a panel of judges for their evaluations as is required in Thurston's equal appearing interval technique (26). The individuals serving as judges were either faculty members or graduate students at Iowa State University who were familiar with the theoretical implications of the attitude dimensions. Past research has established the sufficiency of a group of 15 judges for this stage of scale construction (26). Twenty-one judges were used in this study although the evaluation of a particular item may have been performed on as few as 18 judges due to obvious reversals of the continuum, missing data, or the fact that not all judges judged all scales.

Each judge was given a set of instructions which defined the polar ends and the midpoint of the psychological continuum as well as informed him of the marking procedure for each scale. The definition of the continuum was in each case contained in the first paragraph of the instructions. An example set of instructions is presented below. In evaluating the individual scales only the definition as stated in the first paragraph will be presented. The remaining paragraph, excepting the labels on the continua, remained the same.

**Profit Scale**

This scale is designed to measure the degree to which an individual's orientation is one of making profits for the business through his managerial position. The individual on the high end of this continuum uses only economic criteria
as a basis for his decisions in his business. The individual on the low end of this continuum is characterized by the use of criteria such as the furtherance of employee relations, customer service, etc., in making his managerial decisions.

For each of the following items assume that an individual agrees with the item. In which of the eleven categories on this profit accumulation (or economic motivation) continuum would you place him? You are not to indicate your own feelings about the statement but are to indicate your judgment about an individual who would agree with the item.

Please respond on a 1 to 11 continuum as follows:

<table>
<thead>
<tr>
<th>Low economic motivation</th>
<th>Neutral</th>
<th>High economic motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10 11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Not all of the following statements are "polar" in that they all do not indicate an extreme orientation at one end or the other. Most statements will probably fall between the extreme positions and the neutral (point) (6). Some may even be judged to be completely neutral. In each case, read over the item, think about the individual who would agree with the statement and place your interpretation in the form of a number to the left of the statement.

Each set of instructions was followed by the statements developed for that scale. From the responses of the judges on the 11 point continuum were computed measures of location (scale value) and dispersion
(ambiguity) for each item. The scale value provided the indication as to the direction of scoring for the item as well as a preliminary assessment of the degree of success that was obtained in the attempt to fully cover the continuum. No items were eliminated on the basis of scale value. The standard deviation was computed for each item and was used as the measure of dispersion or the degree of agreement among the evaluations of the judges. Items with large standard deviations were considered either irrelevant to the defined continuum or ambiguous. On the basis of an arbitrary cutting point the number of usable items was cut to 161 or nearly 60% of the original number. No set cutting point was established for any one scale along the 11 point continuum for, as Warland (93) has noted, this line "often resembled a bell-shaped curve, since judgment of the extreme items did not vary as much as those close to the neutral category" (93, p. 78).

This group of items was administered to the sample of 100 managers of Iowa farmer cooperatives. As was mentioned earlier, the pretest analysis was subsequently performed on 91 respondents. The objectives of this pretest for the scale development process were twofold. First, the attempt was made to eliminate all items which were not able to discriminate in the population. Second, basic data from the respondents was obtained which enabled determination of the relationships between items. Upon this basis the content of each dimension could be finalized.

To obtain these data, as previously stated, the managers were asked to respond to each statement by indicating the strength of their agreement or disagreement with it. The following instructions were given to the managers.

On the following twelve pages are a number of statements about business management. We are interested in your feelings or opinions about each statement. You will probably agree with some of these statements. That is, some statements will express your own opinions or feelings about managing. Other statements will express feelings opposite to yours.

After you have read each statement, please circle the "A" (agree) if you agree with the statement or the "D" (disagree) if you disagree with the statement. Once you have made this decision, please indicate how strongly you agree or disagree with the statements by circling one of the numbers which appear to the right of each statement. If it really doesn't make much difference to you if you agree or disagree with the statement, circle 1. If you very strongly agree or disagree with the statement, circle 5. For some statements, the numbers 2, 3, or 4 may better describe how strongly you agree or disagree with the statement. When this is the case, circle the appropriate number.

For example, consider the statement:

All men are created equal.  
\[ \begin{array}{lllll}
A & 1 & 2 & 3 & 4 & 5 \\
D & & & & & \\
\end{array} \]

Do you agree or disagree with this statement? Circle "A" ("D"). How strongly do you agree (disagree) with this statement? Circle the appropriate number.

Please be sure to circle both a letter and a number after each statement, unless you are completely undecided.
whether you agree or disagree with the statement. In that case, circle both "A" and "D", but do not circle any of the numbers. This response indicates that you neither agree nor disagree with the statement.

These statements are in no way designed to be a test. There are no right or wrong answers to the statements. The answers which will be most helpful to this research project are the ones which best reflect your own feelings about each of the statements.

The items, presented as in the example, were randomized so that no bias due to order of presentation would be present. Due to an error in selection of the items 157 of the 161 were useable.

The continuum of agreement for the respondents can be seen to have included eleven categories for response. The scoring procedure, patterned after the certainty method developed by Wolins et al. (97), involved two basic steps. First, the categories indicating intensity—1, 2, 3, 4, and 5—were assigned the values of 1, 2, 3, 5, and 8 respectively. The scoring was done in such a way that agreement with the dimension to which the item belongs as defined theoretically was scored positively and disagreement with it was scored negatively. The position of each item on the continuum was indicated by the judges in their evaluation of it. Thus if an item was negative, the scoring procedure for it was reversed. The range of responses from -8 to 48 was, in the second step, transformed by adding 8 to each value. The possible range for each item is thus from 0 to 16. This procedure, for a positive item, is indicated below:
After the collection of these data, the items were arranged into the eight previously constructed theoretical dimensions for easy reference. The transformations were completed and the scores were coded in preparation for analysis on standard IBM equipment. At this stage a factor analysis was completed by Himes (40) to determine the attitude scales and the items. The other steps taken in the development of attitude scales are the same as those previously outlined in the development of management performance scales. Each scale will be presented in the succeeding parts of this section.

**Profit scale** The profit scale was constructed to measure the degree to which an individual's orientation is one of making profits for the business through his managerial position. Of the original 27 items scored by the judges on this dimension, 13 were used in the field schedule (they had acceptable indexes of ambiguity) and 4 items were used in the final form. It should be mentioned that only the positive end of this continuum is present. The items designed to measure the negative end did not form a sufficiently adequate polar conceptualization of economic motivation to enable it to be distinguished statistically in this sample.

Data relevant to the final items in the profit scale appears in Table 22. The means and standard deviations of the items appear to be somewhat positively related. The item standard deviations cover a range
of 1.19, from 3.27 to 4.46. The coefficient of internal consistency (reliability) for this scale is 0.719. An examination of the item intercorrelations shows that they are concentrated in a relatively narrow range, i.e., over 60 per cent of the intercorrelations fall between 0.40 and 0.59. The range of the coefficients is from 0.219 to 0.589.

Table 22. Data pertaining to the items of the profit scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Factor loading</th>
<th>Sample mean</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.91</td>
<td>0.66</td>
<td>8.40</td>
<td>4.46</td>
</tr>
<tr>
<td>2</td>
<td>0.86</td>
<td>0.65</td>
<td>5.26</td>
<td>3.80</td>
</tr>
<tr>
<td>3</td>
<td>0.87</td>
<td>0.64</td>
<td>4.45</td>
<td>3.27</td>
</tr>
<tr>
<td>4</td>
<td>0.97</td>
<td>0.55</td>
<td>10.56</td>
<td>4.15</td>
</tr>
</tbody>
</table>

The actual range of total scores on the profit scale is from 0 to 55 while the possible range is from 0 to 64. The mean total score is 28.92 and the standard deviation is 11.88. The distribution of the scores, based upon the standard deviation is presented in Table 23. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale.
Table 23. Distribution of scores on the profit scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 16</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td>17 - 28</td>
<td>31</td>
<td>31.6</td>
</tr>
<tr>
<td>29 - 40</td>
<td>38</td>
<td>38.8</td>
</tr>
<tr>
<td>41 - 64</td>
<td>14</td>
<td>14.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>98</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 0 - 55

$\bar{x} = 28.92$

$S = 11.88$

Individualism scale The individualism scale was constructed to measure the degree to which an individual's attitude toward his cognitive world is one of active, aggressive, "rugged individualism." In this case, as in the profit scale, only the positive end of the continuum is present. Of the original 26 items in the individualism dimension scored by the judges, 19 were used in the field schedule and 15 were used in the final scale.

The data for the individualism scale is summarized in Table 24. The item means and item standard deviations appear to be relatively independent. The item standard deviations cover a range of 1.17, from 3.75 to 4.92. The reliability of the scale is 0.802. The distribution of the item intercorrelations shows that they are concentrated in a moderately narrow range, from 0.10 to 0.39. The range of the
The possible range of total scores on the individualism scale is from 6 to 240 and the actual range is from 6 to 227. The distribution of the total scores is shown in Table 25 and is established on the
basis of standard deviations. The mean total score is 138.17 and the standard deviation is 32.99. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale.

Table 25. Distribution of scores on the individualism scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>105 and below</td>
<td>9</td>
<td>9.2</td>
</tr>
<tr>
<td>106 - 138</td>
<td>45</td>
<td>45.9</td>
</tr>
<tr>
<td>139 - 171</td>
<td>32</td>
<td>32.7</td>
</tr>
<tr>
<td>172 and above</td>
<td>12</td>
<td>12.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 6 - 227

$\bar{X} = 138.17$

$S = 32.99$

Independence scale The independence scale was constructed to measure the degree to which an individual wishes to remain independent of those around him.

Data relevant to the items of the independent scale appear in Table 26. The item means and standard deviations appear slightly positively related. The item standard deviations have a range of 1.43, from 3.30 to 4.73. The reliability of the scale is 0.608. The distribution of the item intercorrelations shows that they are concentrated in a relatively narrow range, from 0.30 to 0.39. The range of the inter-
correlations is from 0.336 to 0.384.

Table 26. Data pertaining to items of the independence scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Sample mean ($\bar{x}$)</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.15</td>
<td>6.05</td>
<td>4.73</td>
</tr>
<tr>
<td>2</td>
<td>1.28</td>
<td>4.48</td>
<td>4.15</td>
</tr>
<tr>
<td>3</td>
<td>0.94</td>
<td>5.41</td>
<td>3.30</td>
</tr>
</tbody>
</table>

The actual range of total scores on the independence scale is from 0 to 43 while the possible range is from 0 to 48. The mean total score is 15.83 and the standard deviation is 8.90. The mean and the distribution of the scores indicate that the majority of the managers scored on the negative end of the scale. Distribution of scores on the independence scale is presented in Table 27.

Table 27. Distribution of scores on the independence scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 6</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>7 - 15</td>
<td>28</td>
<td>28.6</td>
</tr>
<tr>
<td>16 - 24</td>
<td>41</td>
<td>41.8</td>
</tr>
<tr>
<td>25 - 48</td>
<td>12</td>
<td>12.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 0 - 43

$\bar{x} = 15.83$

$S = 8.90$
Management orientation scale

The management orientation scale was constructed to measure the degree to which an individual feels he can influence the financial outcomes of the business through his managerial position. Only the positive end of the continuum was operationalized. The items designed to measure the negative end of the dimension were either too ambiguous (as defined by the judges) or did not relate to the dimension.

Twenty-nine items were constructed to measure the management orientation dimension, of which 17 were used in the field schedule and three items were used in the final scale.

Data pertaining to the items of the management orientation scale are presented in Table 28. The item means and standard deviations appear to be somewhat negatively related. The item standard deviations cover a range of 0.97, from 3.81 to 4.78. The reliability coefficient for this scale, computed on the correlations between the items, is 0.598. The distribution of the item intercorrelations shows that they are concentrated in a relatively narrow range, from 0.30 to 0.49. The range of the coefficients is from 0.246 to 0.427.

Table 28. Data pertaining to items of the management orientation scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Sample mean ( \bar{x} )</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.01</td>
<td>10.40</td>
<td>4.17</td>
</tr>
<tr>
<td>2</td>
<td>1.14</td>
<td>8.59</td>
<td>4.78</td>
</tr>
<tr>
<td>3</td>
<td>1.23</td>
<td>10.31</td>
<td>3.81</td>
</tr>
</tbody>
</table>
Table 29 presents the distribution of total scores based upon the standard deviation. The mean and the distribution of the total scores on management orientation indicate that the majority of the managers scored near the center of the scale. The range of scores is from 5 to 48 and the possible range is from 0 to 48. The mean total score is 29.42 and the standard deviation is 9.22.

Table 29. Distribution of scores on the management orientation scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 20</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td>21 - 29</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>30 - 38</td>
<td>30</td>
<td>30.6</td>
</tr>
<tr>
<td>39 - 48</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 0 - 48

\( \bar{X} = 29.42 \)

\( S = 9.22 \)

**Job definition scale** The job definition scale was constructed to measure the degree to which an individual defines the managerial job in terms of positive, flexible control based on mental activity in the handling of people and other business resources.

Originally, 44 items were given to the judges to evaluate only 40 items were used in the final scale. Data pertaining to items of the job definition scale appears in Table 30. The item means and standard
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Factor loading</th>
<th>Sample mean ( \bar{X} )</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.17</td>
<td>.77</td>
<td>13.88</td>
<td>2.38</td>
</tr>
<tr>
<td>2</td>
<td>1.17</td>
<td>.67</td>
<td>12.92</td>
<td>3.04</td>
</tr>
<tr>
<td>3</td>
<td>0.75</td>
<td>.67</td>
<td>13.49</td>
<td>2.44</td>
</tr>
<tr>
<td>4</td>
<td>1.04</td>
<td>.67</td>
<td>13.97</td>
<td>2.39</td>
</tr>
<tr>
<td>5</td>
<td>0.94</td>
<td>.65</td>
<td>11.33</td>
<td>3.31</td>
</tr>
<tr>
<td>6</td>
<td>1.15</td>
<td>.65</td>
<td>14.24</td>
<td>2.05</td>
</tr>
<tr>
<td>7</td>
<td>1.13</td>
<td>.65</td>
<td>14.92</td>
<td>1.65</td>
</tr>
<tr>
<td>8</td>
<td>1.12</td>
<td>.64</td>
<td>12.52</td>
<td>2.98</td>
</tr>
<tr>
<td>9</td>
<td>0.95</td>
<td>.64</td>
<td>13.69</td>
<td>2.21</td>
</tr>
<tr>
<td>10</td>
<td>1.25</td>
<td>.64</td>
<td>14.26</td>
<td>2.18</td>
</tr>
<tr>
<td>11</td>
<td>0.87</td>
<td>.64</td>
<td>13.42</td>
<td>2.32</td>
</tr>
<tr>
<td>12</td>
<td>1.07</td>
<td>.63</td>
<td>14.29</td>
<td>2.21</td>
</tr>
<tr>
<td>13</td>
<td>1.15</td>
<td>-.60</td>
<td>3.80</td>
<td>3.12</td>
</tr>
<tr>
<td>14</td>
<td>1.06</td>
<td>-.60</td>
<td>2.53</td>
<td>3.08</td>
</tr>
<tr>
<td>15</td>
<td>1.12</td>
<td>.57</td>
<td>13.75</td>
<td>2.68</td>
</tr>
<tr>
<td>16</td>
<td>1.06</td>
<td>.56</td>
<td>12.62</td>
<td>2.48</td>
</tr>
<tr>
<td>17</td>
<td>1.18</td>
<td>.56</td>
<td>13.22</td>
<td>2.44</td>
</tr>
<tr>
<td>18</td>
<td>1.16</td>
<td>-.56</td>
<td>2.54</td>
<td>2.60</td>
</tr>
<tr>
<td>19</td>
<td>1.05</td>
<td>.55</td>
<td>13.13</td>
<td>2.76</td>
</tr>
<tr>
<td>20</td>
<td>1.23</td>
<td>.55</td>
<td>14.53</td>
<td>2.11</td>
</tr>
<tr>
<td>21</td>
<td>1.23</td>
<td>.53</td>
<td>12.68</td>
<td>3.11</td>
</tr>
<tr>
<td>22</td>
<td>0.87</td>
<td>.52</td>
<td>10.95</td>
<td>3.26</td>
</tr>
<tr>
<td>23</td>
<td>1.14</td>
<td>.50</td>
<td>13.02</td>
<td>2.89</td>
</tr>
<tr>
<td>24</td>
<td>1.12</td>
<td>.49</td>
<td>13.44</td>
<td>2.19</td>
</tr>
<tr>
<td>25</td>
<td>0.95</td>
<td>-.48</td>
<td>3.99</td>
<td>3.27</td>
</tr>
<tr>
<td>26</td>
<td>1.28</td>
<td>-.47</td>
<td>2.58</td>
<td>2.43</td>
</tr>
<tr>
<td>27</td>
<td>1.12</td>
<td>.47</td>
<td>11.95</td>
<td>3.03</td>
</tr>
<tr>
<td>28</td>
<td>1.21</td>
<td>-.47</td>
<td>2.19</td>
<td>2.42</td>
</tr>
<tr>
<td>29</td>
<td>0.67</td>
<td>.47</td>
<td>14.16</td>
<td>2.71</td>
</tr>
<tr>
<td>30</td>
<td>1.21</td>
<td>.46</td>
<td>13.12</td>
<td>2.90</td>
</tr>
<tr>
<td>31</td>
<td>0.99</td>
<td>.46</td>
<td>12.05</td>
<td>2.71</td>
</tr>
<tr>
<td>32</td>
<td>1.25</td>
<td>.45</td>
<td>12.49</td>
<td>3.36</td>
</tr>
<tr>
<td>33</td>
<td>1.28</td>
<td>.44</td>
<td>12.41</td>
<td>2.56</td>
</tr>
<tr>
<td>34</td>
<td>1.26</td>
<td>.42</td>
<td>11.56</td>
<td>3.16</td>
</tr>
<tr>
<td>35</td>
<td>1.03</td>
<td>.41</td>
<td>13.42</td>
<td>3.11</td>
</tr>
<tr>
<td>36</td>
<td>1.20</td>
<td>.39</td>
<td>13.41</td>
<td>2.58</td>
</tr>
<tr>
<td>37</td>
<td>1.19</td>
<td>-.39</td>
<td>5.43</td>
<td>3.60</td>
</tr>
<tr>
<td>38</td>
<td>1.10</td>
<td>.38</td>
<td>15.03</td>
<td>1.88</td>
</tr>
<tr>
<td>39</td>
<td>1.16</td>
<td>-.38</td>
<td>4.41</td>
<td>3.58</td>
</tr>
<tr>
<td>40</td>
<td>1.29</td>
<td>-.36</td>
<td>4.69</td>
<td>3.31</td>
</tr>
</tbody>
</table>
deviations do not show much relationship. However, upon separating the items into two groups, those with sample means above the midpoint (8.00) and those below, a pattern can be seen. Those above the midpoint have somewhat negatively related means and standard deviations and those below from a positive pattern of relationship. The item standard deviations cover a range of 1.95, from 1.65 to 3.60. The reliability coefficient for the scale is 0.941. The distribution of item intercorrelations is concentrated in a relatively narrow range, from 0.20 to 0.39. The range of the correlation coefficients is from -0.024 to 0.619.

The range of total scores on the job definition scale is from 414 to 637 and the possible range is from 0 to 640. The distribution of total scores shown in Table 31 is based upon the standard deviation. The mean total score is 509.46 and its standard deviation is 55.50. The distribution of the scores and their mean indicate that the majority of the managers scored in the high end of the scale.

Table 31. Distribution of scores on the job definition scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>458 and below</td>
<td>21</td>
<td>21.4</td>
</tr>
<tr>
<td>459 - 516</td>
<td>28</td>
<td>28.6</td>
</tr>
<tr>
<td>517 - 574</td>
<td>30</td>
<td>30.6</td>
</tr>
<tr>
<td>575 and above</td>
<td>19</td>
<td>19.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 414 - 637  
\[ \bar{X} = 516.50 \]  
\[ S = 58.13 \]
Progressivism scale

The progressivism scale was constructed to measure the degree to which an individual is oriented toward trying and accepting new ideas and practices in his business. Of the 25 items scored by the judges, 20 were used in the field schedule and 13 were used in the final scale. The individual with a high progressivism score has expressed general disagreement with the items in the scale. It should be mentioned that the progressivism scale as is presently defined, seems only to be expressed in negative terms by this sample of cooperative managers. Thus before the final analysis scores have been reversed, therefore, the higher the individual orientation toward trying and accepting new ideas and practices in his business the higher will be his score on the scale.

Data concerning the items of the progressivism scale is presented in Table 32. The item means and standard deviations are somewhat negatively related when Item 8 is excluded. With the addition of Item 8 the relationship is less clear and more closely approaches one of independence. The item standard deviations vary over a range of 1.58, from 2.98 to 4.56. The coefficient of reliability for the scale is 0.778. An examination of the item intercorrelations shows them to be concentrated in a relatively narrow range, from 0.10 to 0.29. The range of the coefficients is from 0.006 to 0.596.

The actual range of total scores on the progressivism scale is from 42 to 194 (see Table 33) and the possible range is from 0 to 208. The mean total score is 119.54 and the standard deviation is 24.91. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale.
Table 32. Data pertaining to items of the progressivism scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Factor loading</th>
<th>Sample mean $\bar{x}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.98</td>
<td>.72</td>
<td>10.10</td>
<td>3.69</td>
</tr>
<tr>
<td>2</td>
<td>1.25</td>
<td>.55</td>
<td>11.30</td>
<td>2.98</td>
</tr>
<tr>
<td>3</td>
<td>1.19</td>
<td>.50</td>
<td>9.77</td>
<td>3.80</td>
</tr>
<tr>
<td>4</td>
<td>0.81</td>
<td>.41</td>
<td>10.41</td>
<td>3.58</td>
</tr>
<tr>
<td>5</td>
<td>1.12</td>
<td>.46</td>
<td>7.63</td>
<td>4.56</td>
</tr>
<tr>
<td>6</td>
<td>1.04</td>
<td>.45</td>
<td>10.66</td>
<td>3.24</td>
</tr>
<tr>
<td>7</td>
<td>1.07</td>
<td>.44</td>
<td>10.89</td>
<td>3.17</td>
</tr>
<tr>
<td>8</td>
<td>1.09</td>
<td>.44</td>
<td>4.71</td>
<td>3.32</td>
</tr>
<tr>
<td>9</td>
<td>1.21</td>
<td>-.41</td>
<td>10.79</td>
<td>3.95</td>
</tr>
<tr>
<td>10</td>
<td>0.91</td>
<td>.41</td>
<td>9.80</td>
<td>3.55</td>
</tr>
<tr>
<td>11</td>
<td>1.10</td>
<td>.40</td>
<td>11.51</td>
<td>4.01</td>
</tr>
<tr>
<td>12</td>
<td>1.15</td>
<td>.39</td>
<td>12.09</td>
<td>3.56</td>
</tr>
<tr>
<td>13</td>
<td>1.26</td>
<td>.35</td>
<td>6.13</td>
<td>4.43</td>
</tr>
</tbody>
</table>

Table 33. Distribution of scores on the progressivism scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>94 and below</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>95 - 119</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>120 - 144</td>
<td>43</td>
<td>43.9</td>
</tr>
<tr>
<td>145 and above</td>
<td>42</td>
<td>42.8</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 42 - 194

$\bar{x} = 119.54$

$s = 24.91$
The risk preference scale was constructed to measure the degree to which an individual is willing or perceives it advantageous to involve elements beyond his control to attain economic ends. Twenty-six risk preference items were given to the judges to score. Sixteen of these were used in the field schedule. Eleven items from all attitudes items were used in the final scale.

The data concerning the items of the risk preference scale are presented in Table 34. The item means and standard deviations are relatively independent. The item standard deviations vary over a range of 0.86, from 3.77 to 4.63. The coefficient of reliability for the scale is 0.782. An examination of the distribution of the item intercorrelations shows that they are concentrated in a relatively narrow range, from 0.20 to 0.39. The range of these coefficients is from -0.020 to 0.539.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Factor loading</th>
<th>Sample $\bar{x}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.08</td>
<td>.69</td>
<td>7.68</td>
<td>4.63</td>
</tr>
<tr>
<td>2</td>
<td>1.04</td>
<td>.61</td>
<td>6.77</td>
<td>3.86</td>
</tr>
<tr>
<td>3</td>
<td>1.15</td>
<td>.59</td>
<td>7.07</td>
<td>4.45</td>
</tr>
<tr>
<td>4</td>
<td>1.07</td>
<td>.52</td>
<td>10.44</td>
<td>3.77</td>
</tr>
<tr>
<td>5</td>
<td>1.17</td>
<td>.51</td>
<td>7.29</td>
<td>4.28</td>
</tr>
<tr>
<td>6</td>
<td>1.05</td>
<td>-.47</td>
<td>9.41</td>
<td>4.30</td>
</tr>
<tr>
<td>7</td>
<td>1.20</td>
<td>-.44</td>
<td>8.19</td>
<td>3.85</td>
</tr>
<tr>
<td>8</td>
<td>1.03</td>
<td>.43</td>
<td>6.23</td>
<td>4.23</td>
</tr>
<tr>
<td>9</td>
<td>0.81</td>
<td>.42</td>
<td>7.71</td>
<td>4.19</td>
</tr>
<tr>
<td>10</td>
<td>1.28</td>
<td>-.40</td>
<td>7.09</td>
<td>4.00</td>
</tr>
<tr>
<td>11</td>
<td>1.18</td>
<td>.37</td>
<td>7.38</td>
<td>4.03</td>
</tr>
</tbody>
</table>
The distribution of total scores for the managers on the risk preference scale based on the standard deviation is shown in Table 35.

Table 35. Distribution of scores on the risk preference scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>58 and below</td>
<td>14</td>
<td>14.3</td>
</tr>
<tr>
<td>59 - 84</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>85 - 109</td>
<td>33</td>
<td>33.7</td>
</tr>
<tr>
<td>110 and above</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 13 - 144

\[ \bar{X} = 84.02 \]

\[ S = 25.19 \]

The possible range is from 0 to 1/6 and the scores actually vary from 13 to 144. The mean total score is 84.02 and the standard deviation is 25.19. The mean and the distribution of the total scores indicate that most of the managers scored near the center of the scale.

**Tradition scale**  The tradition scale was constructed to measure the degree to which an individual prefers traditional means of managing a business. This scale was constructed using the method previously outlined early in this chapter. The final tradition scale consists of 9 items.

Data relevant to the items of the tradition scale is presented in Table 36. The item means and standard deviations appear to be somewhat
negatively related. The standard deviations vary over a range of 1.92, from 2.96 to 4.88. The coefficient of reliability for the scale is 0.721. The distribution of the item intercorrelations indicates that they are concentrated in a moderately narrow range, from 0.10 to 0.39. The range of the intercorrelation coefficients is from -0.136 to 0.576.

Table 36. Data pertaining to items of the tradition scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Judge's standard deviation</th>
<th>Factor loading</th>
<th>Sample ( \bar{x} )</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.17</td>
<td>.68</td>
<td>12.87</td>
<td>2.99</td>
</tr>
<tr>
<td>2</td>
<td>1.08</td>
<td>.55</td>
<td>14.15</td>
<td>3.37</td>
</tr>
<tr>
<td>3</td>
<td>1.08</td>
<td>.54</td>
<td>9.95</td>
<td>4.88</td>
</tr>
<tr>
<td>4</td>
<td>1.10</td>
<td>.50</td>
<td>8.93</td>
<td>4.11</td>
</tr>
<tr>
<td>5</td>
<td>1.07</td>
<td>.50</td>
<td>12.24</td>
<td>2.96</td>
</tr>
<tr>
<td>6</td>
<td>0.84</td>
<td>-.42</td>
<td>8.67</td>
<td>4.03</td>
</tr>
<tr>
<td>7</td>
<td>1.10</td>
<td>.39</td>
<td>10.90</td>
<td>3.58</td>
</tr>
<tr>
<td>8</td>
<td>0.97</td>
<td>.35</td>
<td>10.98</td>
<td>3.44</td>
</tr>
<tr>
<td>9</td>
<td>1.28</td>
<td>-.32</td>
<td>4.36</td>
<td>4.40</td>
</tr>
</tbody>
</table>

Table 37 presents the distribution of the total scores of the managers on the tradition scale based upon the standard deviation of the scores. The possible range of scores is from 0 to 144 while the actual range is from 5 to 139. The mean total score is 97.76 and the standard deviation is 18.65. The mean and distribution of the total scores indicate that most managers scored in the low half of the continuum.
Table 37. Distribution of scores on the tradition scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>79 and below</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>80 - 97</td>
<td>37</td>
<td>37.8</td>
</tr>
<tr>
<td>98 - 116</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>117 and above</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 5 - 139  
$\bar{X} = 97.76$  
$S = 18.65$

Tables 38 and 39, summarizing the characteristics of the eight attitude scales, show the wide variance existing in the number of items in these scales. They also show the distribution of intercorrelations among the items of the scales. Table 40 presents the intercorrelation of attitude scales. From these coefficients one might conclude that attitude scales are independent of each other. It should be kept in mind that tradition scale was developed from the content of the items, in final stage of the analysis, which were all negative but the scoring was reversed. This was done to facilitate the analysis. By definition the tradition scale is an opposing conceptualization of the progressivism scale. This possibility is supported by the correlation of 0.402, shown in Table 40, between the two scales (with scoring of negative items reversed). However, this (the interrelation between traditionalism and progressivism) relation was partially ignored in the overall analysis.
Table 38. Summary of the characteristics of the attitude scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Number of items</th>
<th>$I^2$</th>
<th>Relationship of $X$ and $S$</th>
<th>Range of $S$</th>
<th>Concentration of intercorrelations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Job definition</td>
<td>40</td>
<td>0.941</td>
<td>Somewhat curvilinear</td>
<td>1.95</td>
<td>0.20 - 0.39</td>
</tr>
<tr>
<td>2. Individualism</td>
<td>15</td>
<td>0.802</td>
<td>Relatively independent</td>
<td>1.17</td>
<td>0.10 - 0.39</td>
</tr>
<tr>
<td>3. Risk preference</td>
<td>11</td>
<td>0.782</td>
<td>Relatively independent</td>
<td>0.86</td>
<td>0.20 - 0.39</td>
</tr>
<tr>
<td>4. Progressivism</td>
<td>13</td>
<td>0.778</td>
<td>Relatively independent</td>
<td>1.58</td>
<td>0.10 - 0.29</td>
</tr>
<tr>
<td>5. Profit</td>
<td>4</td>
<td>0.719</td>
<td>Somewhat positive</td>
<td>1.19</td>
<td>0.40 - 0.59</td>
</tr>
<tr>
<td>6. Tradition</td>
<td>9</td>
<td>0.721</td>
<td>Somewhat negative</td>
<td>1.92</td>
<td>0.10 - 0.39</td>
</tr>
<tr>
<td>7. Independence</td>
<td>3</td>
<td>0.608</td>
<td>Slightly positive</td>
<td>1.43</td>
<td>0.30 - 0.39</td>
</tr>
<tr>
<td>8. Management</td>
<td></td>
<td>0.598</td>
<td>Somewhat negative</td>
<td>0.97</td>
<td>0.30 - 0.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Coefficient of internal consistency $I = \frac{nr^2}{1 + (n-1)r^2}$ where $n$ refers to the number of items in the factor (attitude dimension in this case) and $r^2$ refers to the square of the average factor loading.*
Table 39. Distribution of intercorrelations among the items of the attitude scales

<table>
<thead>
<tr>
<th>Intercorrelation range</th>
<th>Profit</th>
<th>Individualism</th>
<th>Risk preference</th>
<th>Job definition</th>
<th>Progressivism</th>
<th>Tradition</th>
<th>Independence</th>
<th>Management orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than .00</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.00 - 0.09</td>
<td>14</td>
<td>3</td>
<td>44</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.10 - 0.19</td>
<td>22</td>
<td>9</td>
<td>130</td>
<td>26</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.20 - 0.29</td>
<td>1</td>
<td>33</td>
<td>23</td>
<td>262</td>
<td>24</td>
<td>8</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>0.30 - 0.39</td>
<td>1</td>
<td>27</td>
<td>13</td>
<td>225</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>0.40 - 0.49</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>87</td>
<td>9</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>0.50 - 0.59</td>
<td>3</td>
<td></td>
<td>1</td>
<td>27</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.60 and above</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of</td>
<td>6</td>
<td>105</td>
<td>55</td>
<td>780</td>
<td>78</td>
<td>36</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>intercorrelations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>0.219 to -0.029</td>
<td>-0.029</td>
<td>-0.024</td>
<td>0.006</td>
<td>-0.136</td>
<td>0.336</td>
<td>0.246</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.589 to 0.624</td>
<td>to 0.624</td>
<td>to 0.619</td>
<td>to 0.596</td>
<td>to 0.576</td>
<td>to 0.384</td>
<td>to 0.427</td>
<td></td>
</tr>
<tr>
<td>No. of items</td>
<td>4</td>
<td>15</td>
<td>11</td>
<td>40</td>
<td>13</td>
<td>9</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^{a}\)The bracket for each scale denotes the concentration of the item intercorrelations, i.e., where 60% or more of the coefficients are grouped.
Table 40. Intercorrelation of attitude scales

<table>
<thead>
<tr>
<th></th>
<th>Profit</th>
<th>Individualism</th>
<th>Independence</th>
<th>Management orientation</th>
<th>Job definition</th>
<th>Progressivism</th>
<th>Risk preference</th>
<th>Tradition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Profit</td>
<td></td>
<td>0.240</td>
<td>0.035</td>
<td>0.045</td>
<td>-0.108</td>
<td>-0.301</td>
<td>0.260</td>
<td>-0.123</td>
</tr>
<tr>
<td>2. Individualism</td>
<td></td>
<td></td>
<td>0.135</td>
<td>0.135</td>
<td>0.042</td>
<td>-0.217</td>
<td>0.295</td>
<td>-0.107</td>
</tr>
<tr>
<td>3. Independence</td>
<td></td>
<td></td>
<td></td>
<td>-0.213</td>
<td>-0.311</td>
<td>0.042</td>
<td>0.016</td>
<td>-0.045</td>
</tr>
<tr>
<td>4. Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Job definition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.254</td>
<td>-0.088</td>
<td>0.305</td>
</tr>
<tr>
<td>6. Progressivism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.089</td>
<td>0.402</td>
</tr>
<tr>
<td>7. Risk preference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.080</td>
</tr>
<tr>
<td>8. Tradition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^a The reader is reminded that the scoring on the traditionalism scale was reversed (see discussion, page 220). Therefore, interpretation of specific r values involving the traditionalism scale should be made with this reversed scoring in mind, e.g., there is in fact a negative correlation between traditionalism (as defined and without score reversed) and progressivism.

^b Residual factors.
Knowledge measures

The broad category of knowledge is operationally defined in this research study by several specific measures. In the previous chapter knowledge variables have been categorized into three categories. These categories are:

(1) formal learning opportunities
(2) past relevant experience
(3) level of knowledge variables.

Each category was defined and variables under each category were specified and defined. In this section measuring devices for each of the previously specified and defined variable will be developed.

Formal learning opportunities

Formal learning opportunities variables include:

(1) Manager's years of formal education
(2) Manager's years of vocational agriculture
(3) Management training
(4) Any specialized training in any of the major product lines of the cooperative association or any specialized training in management itself (i.e., workshops, short courses, conferences, etc.).

Manager's years of formal education

This variable was measured by asking each manager the following question:

"How many years of formal education have you completed?"

The actual number of years of formal education given by the manager has been used as the operational measure of that concept. The range of scores on years of formal education variable is from 8 to 16. The mean of the
managers' scores of years of formal education is 12.70 and the standard deviation is 1.85. Distribution of scores on years of formal education variable based on standard deviation is presented in Table 41.

Table 41. Distribution of scores on years of formal education variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 and below</td>
<td>7</td>
<td>7.1</td>
</tr>
<tr>
<td>10 - 12</td>
<td>52</td>
<td>53.1</td>
</tr>
<tr>
<td>13 - 14</td>
<td>23</td>
<td>23.5</td>
</tr>
<tr>
<td>over 14</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 8 - 16

\[ \bar{X} = 12.70 \]

\[ S = 1.85 \]

Manager's years of vocational agriculture: Each respondent was asked the following two questions.

"If attended high school. Did you take vocational agriculture in high school?"

Those managers who did not apply were given score zero. "No" and "Yes" responses were given scores 1 and 2 respectively.

"How many years of vocational agriculture did you take?"

Those managers who did not apply were given score zero. Also actual number of years of vocational agriculture mentioned by the manager was recorded. The total of the manager's response to both questions was used.
The range of scores on years of vocational agriculture variable is from 0 to 6. The mean of scores on this variable is 2.23 and the standard deviation is 1.69. Distribution of scores on years of vocational agriculture variable based on standard deviation is presented in Table 42.

Table 42. Distribution of scores on years of vocational agriculture variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.53 and below</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>0.54 - 2.23</td>
<td>55</td>
<td>56.1</td>
</tr>
<tr>
<td>2.24 - 3.92</td>
<td>14</td>
<td>14.3</td>
</tr>
<tr>
<td>3.93 and above</td>
<td>26</td>
<td>26.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Management training To operationalize this concept the manager was asked two questions.

"Prior to or during your 1st years of management, did you attend any management training schools, workshops, or take any business courses in school?"

**Code**

1 = No

2 = Yes

"If yes to the above question. How many and what were they?"
Code 0 = Does not apply

1 = Workshops and training schools (sponsored by regional co-op or Iowa Institute of Cooperation).

2 = Short courses (at Iowa State University).

3 = Night school.

4 = College correspondence course(s).

5 = (regular) college course(s).

The total of the manager's response to both questions was used in the analysis. The range of scores on management training variable is from 0 to 7. The mean of the managers' scores on this variable is 2.51 and the standard deviation is 1.94. Distribution of scores on management training variable based on standard deviation is presented in Table 43.

Table 43. Distribution of scores on management training variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.56 and below</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>0.57 - 2.51</td>
<td>51</td>
<td>52.0</td>
</tr>
<tr>
<td>2.52 - 4.45</td>
<td>31</td>
<td>31.6</td>
</tr>
<tr>
<td>4.46 and above</td>
<td>15</td>
<td>15.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 0 - 7

\[ \bar{X} = 2.51 \]

\[ S = 1.94 \]
Any specialized training. Any specialized training in any of the major product lines of the cooperative association or any specialized training in management itself was operationalized by asking each respondent the following question.

"Have you had any specialized training in any of your major product lines or in management itself, during the past 2 years? (Specialized training includes workshops, short courses, training schools, refresher courses, conferences, etc.)."

**Code**

1 = No

2 = Yes

The mean of the managers' scores on this variable is 1.78 and the standard deviation is 0.42. The distribution of scores by category appears in Table 44.

Table 44. Distribution of scores on any specialized training (the manager had) variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
<td>22.4</td>
</tr>
<tr>
<td>2</td>
<td>76</td>
<td>77.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 1 - 2

\[ \bar{X} = 1.78 \]

\[ S = 0.42 \]
Past relevant experience Past relevant experience as previously defined includes manager's management experience, manager's farm work experience, and the manager's years as manager of the farmer cooperative. The measure used in operationalizing each of those concepts will be presented in the following.

Management experience To determine an individual's management experience score each respondent was asked:

"How long have you had full responsibility for the management of a business?"

Actual number of years given by the respondent was used as a measure of management experience. The range of scores on management experience variable is from 3 to 48. The mean of managers' scores on management experience variable is 15.68 and the standard deviation is 9.76. The distribution of scores on management experience variable based on standard deviation is presented in Table 45.

Table 45. Distribution of scores on management experience variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 and below</td>
<td>13</td>
<td>13.3</td>
</tr>
<tr>
<td>6 - 15</td>
<td>41</td>
<td>41.8</td>
</tr>
<tr>
<td>16 - 25</td>
<td>29</td>
<td>29.6</td>
</tr>
<tr>
<td>Over 25</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 3 - 48

$\bar{x} = 15.68$

$s = 9.76$
Farm work experience

To determine an individual's farm work experience score each respondent was asked:

"Have you ever lived on or worked on a farm?"

If the respondent answered this question by "Yes", score two was assigned to him. Score one was assigned to those who answered the question by "No". If the respondent answered the above question by "yes", he was asked the following question:

"For how long?"

Responses to this question were coded as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Does not apply</td>
</tr>
<tr>
<td>1</td>
<td>1 - 4 years</td>
</tr>
<tr>
<td>2</td>
<td>5 - 9 years</td>
</tr>
<tr>
<td>3</td>
<td>10 - 14 years</td>
</tr>
<tr>
<td>4</td>
<td>15 - 19 years</td>
</tr>
<tr>
<td>5</td>
<td>20 - 24 years</td>
</tr>
<tr>
<td>6</td>
<td>25 or more years</td>
</tr>
</tbody>
</table>

The total score of an individual's response to the above two questions was used as his score on farm work experience variable. Range of farm work experience scores is from 1 to 8. The mean of the managers' farm work experience scores is 5.55 and the standard deviation is 2.04. Distribution of farm work experience scores is presented in Table 46.
Table 46. Distribution of scores on farm work experience variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 and below</td>
<td>21</td>
<td>21.4</td>
</tr>
<tr>
<td>4 - 5</td>
<td>9</td>
<td>9.2</td>
</tr>
<tr>
<td>6 - 7</td>
<td>53</td>
<td>54.1</td>
</tr>
<tr>
<td>over 7</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 1 - 8
\[ \bar{X} = 5.55 \]
\[ S = 2.04 \]

Years as manager of this farmer cooperative To determine an individual's score on this variable, each respondent was asked: "How long have you been the manager of this business?"

The actual number of years mentioned by the respondent was used as his score on this variable. The range of scores on this variable is from 3 to 39. The mean of the managers' scores on this variable is 11.77 and the standard deviation is 8.01. Distribution of scores on this variable is presented in Table 47.
Table 47. Distribution of scores on years as manager of the farmer cooperative variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 and below</td>
<td>14</td>
<td>14.3</td>
</tr>
<tr>
<td>4 - 11</td>
<td>39</td>
<td>39.8</td>
</tr>
<tr>
<td>12 - 19</td>
<td>29</td>
<td>29.6</td>
</tr>
<tr>
<td>over 19</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 3 - 39
\[ \bar{X} = 11.77 \]
\[ S = 8.01 \]

**Level of knowledge**  
As previously stated level of knowledge in a specific area related to management is defined as the manager technical competence in that area. Manager's level of chemical knowledge, level of fertilizer knowledge, and level of economic knowledge are of major concern in this study as previously stated. Measures of each of those areas will be developed in this section.

**Level of chemical knowledge**  
To determine an individual's level of chemical knowledge each respondent was asked:

"Now I'm going to read to you a series of statements regarding agricultural chemicals. We would like your opinion about these statements."

Each respondent was asked to indicate if he agrees or disagrees with the statement or has no opinion about it. The statements and their correct answers are as follows:
The U. S. Department of Agriculture has the responsibility to enforce the proper use of insecticides.

(correct answer = disagree)

Chlordane is not a recommended residual fly control which can be sprayed on the walls in a dairy barn.

(correct answer = agree)

The recommended dosage for spraying 2,4-D on corn at "lay by" time using a drop-extension nozzle is 1/2 lb. or one pint of ester per acre.

(correct answer = disagree)

When amino-triazole is applied to thistle patches in a pasture, it is recommended that livestock not be allowed on the treated area for eight months.

(correct answer = agree)

Amiben is an effective perennial weed killer in soybeans.

(correct answer = disagree)

Corn treated with Taxaphene should not be made into silage.

(correct answer = agree)

Two pounds per acre of actual Aldrin or Heptachlor which is broadcast and disked in will control all major soil insects attacking corn on sod ground.

(correct answer = agree)

Individual's total number of correct answers was used as his level of chemical knowledge score. Range of scores on level of chemical knowledge variable is from 0 to 6. The mean of managers' scores on level of chemical knowledge variable is 3.05 and the standard deviation
is 1.35. Distribution of scores on level of chemical knowledge variables based on standard deviation is presented in Table 48.

**Table 48. Distribution of scores on level of chemical knowledge variable**

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.69 and below</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td>1.70 - 3.05</td>
<td>46</td>
<td>46.9</td>
</tr>
<tr>
<td>3.06 - 4.40</td>
<td>21</td>
<td>21.4</td>
</tr>
<tr>
<td>4.41 and above</td>
<td>15</td>
<td>15.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 0 - 6

$\bar{X} = 3.05$

$S = 1.35$

Level of fertilizer knowledge To determine an individual's level of fertilizer knowledge each respondent was asked:

"Next we would like to ask you some questions concerning fertilizer and its application... For each question select the answer that in your opinion best answers the question."

Under adequate moisture conditions, fertilizer applications which increase corn yields can:

1. Decrease the pounds of water needed to produce one bushel of corn.

2. Increase the pounds of water needed to produce one bushel of corn.
3. Decrease the total amount of water used by the crop.
4. Decrease water loss through corn leaves.

(Correct answer Item No. 1)

Potash deficiency symptoms on corn can be recognized by a:
1. Light green color of the corn field in general.
2. Purpling of the upper corn leaves.
3. Browning of the outer margins of the lower corn leaves.
4. Yellowing of the mid-ribs of the lower corn leaves.

(Correct answer Item No. 3)

If used in the row of corn, the minimum percentage of water soluble phosphorus should be:
1. 80%
2. 50%
3. 20%
4. 100%

(Correct answer Item No. 2)

Fertilizer nutrients, if needed:
1. Can be insurance against drought for corn if subsoil water is adequate.
2. Cause corn plants to use less total water.
3. Draws corn roots toward it when placed deep in the soil.
4. Cause lower leaves of corn to "fire" in dry weather.

(Correct answer Item No. 1)

A high percentage of water soluble phosphorus is desirable for:
1. Phosphorus being plowed down for corn.
2. Top dressing established legume meadows.

3. Row fertilizer for corn.


(Correct answer Item No. 3)

Maximum chemical availability of P in fertilizer:

1. Occurs for low water soluble materials when they are finely ground and banded in the soil.

2. Occurs for low water soluble materials when pelleted and widely dispersed in the soil.

3. Occurs for high water soluble material when hill dropped or band applied.

4. Occurs for high water soluble materials when finely ground and widely dispersed in the soil.

(Correct answer Item No. 3)

When sampling soils in Iowa:

1. Take one core for every 10 acres.

2. Separate fields into separate areas based on soil differences or differences in past management.

3. Subsoil sampling is recommended.

4. Allow samples to dry thoroughly before sending to the laboratory.

(Correct answer Item No. 2)

In taking soil samples, the greatest mistake is to:

1. Mix soil from a wet area and a sloping area into one sample.
2. Take too few cores from a single soil type.
3. Take too many cores from a single soil type.
4. Include more than ten acres into one sample.
(Correct answer Item No. 1)

Nitrogen fertilizer can be applied in different ways. Which one of the following application methods is most effective in increasing corn yields assuming proper application equal N rates, similar weed control and normal rainfall?

1. Plow-down application.
2. Disked-in on plowed ground.
3. Pre-plant injections.
4. Side-dressings up to the time the corn is 15 inches tall.
5. All methods are equally effective.
(Correct answer Item No. 5)

If a farmer elects to apply all of his fertilizer for corn as a plow-down application at the medium rate, under which one of the following conditions could he expect the most effective use of his fertilizer?

1. A wetter than average growing season.
2. Growing season with temperatures higher than average.
3. A dryer than average growing season.
4. Growing season with temperatures lower than average.
(Correct answer Item No. 3)

Individual's total number of correct answers was used as his level of fertilizer knowledge score. Range of scores on level of fertilizer
knowledge variable is from 1 to 8. The mean of managers' scores on level of fertilizer knowledge variable is 4.52 and the standard deviation is 1.92. Distribution of scores on level of fertilizer knowledge variable based on standard deviation is presented in Table 49.

Table 49. Distribution of scores on level of fertilizer knowledge variable

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.59 and below</td>
<td>18</td>
<td>18.4</td>
</tr>
<tr>
<td>2.60 - 4.52</td>
<td>35</td>
<td>35.7</td>
</tr>
<tr>
<td>4.53 - 6.44</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>6.45 and above</td>
<td>21</td>
<td>21.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 1 - 8

\[ \bar{X} = 4.52 \]

\[ S = 1.92 \]

**Level of economic knowledge** As previously stated, level of economic knowledge has been defined in terms of finance knowledge, knowledge about money value, knowledge about profit building, and knowledge about margin determination.

**Level of finance knowledge** To determine an individual's level of finance knowledge each respondent was asked:

"Will you please give me an interpretation of the status of this business as represented on these financial sheets?"
239

Code
1 = Good; doing well (no qualification offered).
2 = Doing well but-- (some qualification offered).
3 = Business is OK because net savings is good.
4 = Liabilities are too high, otherwise the business is average.
5 = Not too good because assets equal liabilities ratio is not good.
6 = The assets to liabilities ratio is not good. Other income, cash-on-hand, and sales costs are too high.

What additional information do you need to take full advantage of these statements?

Code
1 = No other information needed.
2 = Breakdown of aging accounts receivable and other income.
3 = Need a better breakdown of expenses, assets, liabilities, and age of accounts receivable.
4 = Need a complete detailed breakdown of assets, liabilities, and operating expenses giving a comprehensive picture of the whole business; also the age of accounts receivable and a detailed listing of other income.

How precise are these financial statements?

Code
1 = Precise, accurate, and enough information is presented.
2 = Precise if certified by audit.
3 = Perhaps precise but not enough information.
4 = Not precise, and not enough information.
What do you feel are the main purposes of financial statements?

**Code**

1 = For tax purposes only.

2 = To show the manager, stockholders, the directors, and bank(s) the present financial position of the business.

3 = As a guide for planning inventory.

4 = As a yardstick (i.e., the making of comparisons) and as a guide for the future.

5 = To determine profitability by departments, check on overhead costs, and to help plan future inventory (as compared to experience).

6 = As a comparative tool to help in planning the budget, stocking of inventory, indicator of farming trends, and as a guide in making changes (corrections) in our business.

What is the best way to use financial statements in evaluating business? Computing certain ratios and:

**Code**

1 = Comparing with industry ratios.

2 = Comparing with last year's ratios.

3 = Comparing with your own goals.

The individual's response to each question was scored as shown above. Total of scores given for each question response in each individual case was used as his level of finance knowledge score. Range of managers' level of finance knowledge scores is from 6 to 23. The mean of level of finance knowledge scores is 15.42 and the standard deviation is 3.96. Distribution of managers' level of finance knowledge scores based on standard deviation is presented in Table 50.
Table 50. Distribution of managers' level of finance knowledge scores

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.45 and below</td>
<td>18</td>
<td>18.4</td>
</tr>
<tr>
<td>11.46 - 15.42</td>
<td>28</td>
<td>28.6</td>
</tr>
<tr>
<td>15.43 - 19.38</td>
<td>34</td>
<td>34.6</td>
</tr>
<tr>
<td>19.39 and above</td>
<td>18</td>
<td>18.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 6 - 23

\[ \bar{X} = 15.42 \]

\[ S = 3.96 \]

Level of knowledge about money value

To determine an individual's level of knowledge about money value each respondent was asked:

Now we would like to get your reaction to the following hypothetical problems. You are advising a farmer who owns 360 acres of crop land. 300 acres are top quality land. 60 acres is land that will raise corn but not as well as the rest of the farm. It would be possible to raise trees on this land that would produce in 10 years.

Which of the following alternatives would you recommend to this farmer?

**Code**

1 = Raise corn on this 60 acres of land and receive a net profit of $900 per year for 10 years.

2 = Raise trees on this 60 acres of land and receive $10,000 net profit at the end of 10 years.

What factors did you take into consideration in
making this decision?

\textbf{Code}

6 = He can invest the $900 he receives from the corn each year and make more money in 10 years than he will receive from the trees at the end of 10 years.

5 = He will get some income each year.

4 = If he used a good fertilizer program he could make more than $900 per year.

3 = He would have to clear stumps at the end of 10 years. We are in the corn handling business; would hate to see too much land in trees.

2 = Putting in trees is good conservation. It makes a good watershed.

1 = The trees would be less work and make more money. If it isn't tillable, put in the trees and make an extra $1000.

Scores have been assigned to alternative responses on the basis of the economic soundness of each response as judged by economists and sociologists with economic training working on this project. Total score given to individual's response to both questions was used as a measure of his level of knowledge about money value. Range of managers' level of knowledge about money value scores is from 3 to 12. The mean of managers' level of knowledge about money value scores is 4.59 and the standard deviation is 1.65. Distribution of managers' level of knowledge about money value scores based on standard deviation is presented in Table 51.
Table 51. Distribution of managers' level of knowledge about money value scores

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.93 and below</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.94 - 4.59</td>
<td>60</td>
<td>61.2</td>
</tr>
<tr>
<td>4.60 - 6.24</td>
<td>20</td>
<td>20.4</td>
</tr>
<tr>
<td>6.25 and above</td>
<td>18</td>
<td>18.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>

Range = 3 - 12
\( \bar{X} = 4.59 \)
\( S = 1.65 \)

Level of knowledge about profit building  
To determine an individual's level of knowledge about profit building each respondent was asked:

The fertilizer department in a farm supply business showed this financial statement at the close of the last fiscal year.

<table>
<thead>
<tr>
<th>Sales</th>
<th>Margins</th>
<th>Direct costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>$50,000</td>
<td>$40,000</td>
</tr>
<tr>
<td>$15,000</td>
<td>$5,000</td>
<td></td>
</tr>
</tbody>
</table>

What factors should a manager take into consideration in deciding whether or not to drop the fertilizer department? (Probe to get respondent to directly answer the question.)

Code

1 = Fertilizer is a service department and is essential to a farm supply business. It should be kept unless it sinks the whole business.

2 = Keep it as a service if the losses are minor.
3 = If it doesn't make money, drop it.

4 = If you can't raise the margin and reduce the costs, then get out.

5 = Reconsider the margins and costs; try to find the problem.

6. Keep it and try to increase sales, cut margins and costs, and perhaps change or improve the equipment.

Scoring of the above responses is based on the economic theory especially in regard to profit building. The individual's response to the above question is scored as shown above and used as a measure of his level of knowledge about profit building score in this study. Range of the managers' level of knowledge about profit building scores is from 1 to 6. The mean of the managers' level of knowledge about profit building scores is 4.55 and the standard deviation is 1.24. Distribution of managers' level of knowledge about profit building scores based on standard deviation is presented in Table 52.

Table 52. Distribution of managers' level of knowledge about profit building scores

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.30 and below</td>
<td>23</td>
<td>23.5</td>
</tr>
<tr>
<td>3.31 - 4.55</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td>4.56 - 5.79</td>
<td>34</td>
<td>34.7</td>
</tr>
<tr>
<td>5.78 and above</td>
<td>25</td>
<td>25.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>98</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 1 - 6  
\( \bar{X} = 4.55 \)

\( S = 1.24 \)
Level of knowledge about margin determination

To determine an individual's level of knowledge about margin determination, each respondent was asked:

When pricing products and services several factors must be taken into account. Under certain conditions it may be wise to maintain a wide margin even at the sacrifice of sales volume while in other instances it would be better to maintain a smaller margin to get increase sales volume.

For each situation, please state whether you would maintain a large margin with the possibility of decreasing the volume, or maintain a small margin with the possibility of increasing the volume. (Encircle one.) (Here correct answer is circled)

1. Brand handled recognized by customers as superior to that of competitors. [S]
2. Extra services wanted by customers cannot be (or are not) provided. [L]
3. Many other dealers in the trade area have full competitive lines. [L]
4. An aggressive sales and merchandising program is maintained. [S]
5. Many expenses are fixed so that total per unit handling costs decrease sharply as volume increases. [L]
6. Increased sales of this line have little value for increasing sales of other lines handled. [L]

Total number of correct answers for each respondent has been used as his level of knowledge about margin determination score. Range of the managers' level of knowledge about margin determination scores is from 2 to 6. The mean of the managers' level of knowledge about margin determination scores is 4.59 and the standard deviation is 1.07. Distribution of managers' level of knowledge about margin determination scores...
based upon the standard deviation is presented in Table 53.

Table 53. Distribution of managers' level of knowledge about margin determination scores

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.51 and below</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>3.52 - 4.59</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>4.60 - 5.66</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>5.67 and above</td>
<td>21</td>
<td>21.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 2 - 6

\[ \bar{X} = 4.59 \]

\[ S = 1.07 \]

Job satisfaction scale

The job satisfaction scale was constructed to measure the degree to which an individual is satisfied with his job. This scale was constructed by the methods and procedures outlined in the preceding parts of this chapter.

Each respondent in the sample was asked:

We would now like to talk with you about your satisfaction with various aspects of your position. For each aspect of your job that I read to you, indicate whether you are satisfied or dissatisfied. Then indicate how strongly satisfied or dissatisfied you are by giving me a number from 1 to 5. Number 5 indicates a very great degree of satisfaction or dissatisfaction while number 1 indicates very slight amounts of satisfaction or dissatisfaction.
Individual's response to each statement was coded as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Dissatisfied 5</td>
</tr>
<tr>
<td>03</td>
<td>Dissatisfied 4</td>
</tr>
<tr>
<td>05</td>
<td>Dissatisfied 3</td>
</tr>
<tr>
<td>06</td>
<td>Dissatisfied 2</td>
</tr>
<tr>
<td>07</td>
<td>Dissatisfied 1</td>
</tr>
<tr>
<td>08</td>
<td>No opinion</td>
</tr>
<tr>
<td>09</td>
<td>Satisfied 1</td>
</tr>
<tr>
<td>10</td>
<td>Satisfied 2</td>
</tr>
<tr>
<td>11</td>
<td>Satisfied 3</td>
</tr>
<tr>
<td>13</td>
<td>Satisfied 4</td>
</tr>
<tr>
<td>16</td>
<td>Satisfied 5</td>
</tr>
</tbody>
</table>

Individuals who were strongly dissatisfied were given the lowest score on the satisfaction continuum. In contrast those who were strongly satisfied were given the highest score on the continuum. However, those with no opinion were given the medium score on the continuum, that is, first to reduce the variation in the data, second to produce the data in applicable form for the purpose of statistical analysis. A list of the job satisfaction items which were used in building this scale is presented in Appendix C.

Data relevant to the final items in the job satisfaction scale appears in Table 54. The means and standard deviations of the items appear to be relatively independent. The item standard deviations cover a range of 1.9093, from 2.0572 to 3.9665. The coefficient of internal consistency (reliability) for this scale is 0.7612. By examining the item inter-correlations which are presented in Table 55, it appears that they are
Table 54. Data pertaining to the items of job satisfaction scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Sample $\bar{X}$</th>
<th>Sample standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14.7857</td>
<td>2.0572</td>
</tr>
<tr>
<td>2</td>
<td>13.1020</td>
<td>2.5343</td>
</tr>
<tr>
<td>3</td>
<td>12.2959</td>
<td>2.2208</td>
</tr>
<tr>
<td>4</td>
<td>11.4082</td>
<td>3.4517</td>
</tr>
<tr>
<td>5</td>
<td>10.4388</td>
<td>3.9665</td>
</tr>
<tr>
<td>6</td>
<td>13.0204</td>
<td>2.3941</td>
</tr>
<tr>
<td>7</td>
<td>12.8776</td>
<td>2.2670</td>
</tr>
<tr>
<td>8</td>
<td>13.8776</td>
<td>2.3343</td>
</tr>
</tbody>
</table>

concentrated in a relatively narrow range, i.e., about 65 per cent of the intercorrelations fall between 0.21 and 0.37. The range of the intercorrelation coefficients is from 0.0357 to 0.6171.

The actual range of total scores on this scale is from 56 - 128 while the possible range is from zero to 128. The mean total score is 101.49 and the standard deviation is 13.07. Distribution of scores on job satisfaction scale based upon the standard deviation is presented in Table 56. The mean and the distribution of the scores indicate that the majority of the managers scored near the center of the scale.
Table 55. Job satisfaction item intercorrelations and item-total correlations^a,b^  

<table>
<thead>
<tr>
<th>Item No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Total^c^</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0.3740</td>
<td>0.0659</td>
<td>0.2709</td>
<td>0.2252</td>
<td>0.1977</td>
<td>0.3237</td>
<td>0.6171</td>
<td>0.4311</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>0.2693</td>
<td>0.4371</td>
<td>0.2150</td>
<td>0.4448</td>
<td>0.3377</td>
<td>0.3367</td>
<td>0.4120</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>0.2356</td>
<td>0.1536</td>
<td>0.4216</td>
<td>0.2550</td>
<td>0.0528</td>
<td>0.4051</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>0.0357</td>
<td>0.4019</td>
<td>0.3582</td>
<td>0.2801</td>
<td>0.3304</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>0.2574</td>
<td>0.2468</td>
<td>0.3644</td>
<td>0.4862</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>0.3424</td>
<td>0.3085</td>
<td>0.4323</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>0.4413</td>
<td>0.5582</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>0.4694</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^a^Reliability coefficient = $r_{tt} = 0.7612$.  
^b^The above table includes only the significant items which have been used in the final analysis.  
^c^Greater than the minimum acceptable item total correlation coefficient $r_{it}$. 

Table 56. Distribution of scores on job satisfaction scale

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>87.00 and below</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>88.42 - 101.49</td>
<td>43</td>
<td>43.9</td>
</tr>
<tr>
<td>102.00 - 115.07</td>
<td>29</td>
<td>29.6</td>
</tr>
<tr>
<td>116.00 and above</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 56 - 128

$\bar{X} = 101.49$

$S = 13.07$

Sources of information measures

It has been stated before that there are two types of sources of information in this study. These are sources of management information and sources of products information. Measures for each will be developed in the following.

Sources of management information

To determine an individual's sources of management information score each respondent was asked:

- What sources of information about managing are you presently using?
- Clinics and short courses sponsored by commercial companies.
- Farm magazines: list.
- Magazines subscribed to by dealers only: list.
- Good managers in your area.
Total number of information sources given by the manager has been used as his sources of management information score. Range of managers' sources of management information scores is from 2 to 65. The mean of the managers' sources of management information scores is 8.72 and the standard deviation is 9.40. Distribution of managers' sources of management information scores by categories is presented in Table 57.

Table 57. Distribution of managers' sources of management information scores by categories

<table>
<thead>
<tr>
<th>Score Category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 and below</td>
<td>59</td>
<td>60.2</td>
</tr>
<tr>
<td>8 - 17</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>18 and above</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 2 - 65  
$\bar{X} = 8.72$  
$S = 9.40$
Sources of product information To determine an individual's sources of product information each respondent was asked:

What sources of information about products and their uses are you presently using.

1. Clinics and short courses sponsored by commercial companies.
2. Farm magazines; list.
3. Magazines subscribed to by dealers only; list.
4. Good managers in your area.
5. Iowa State University and extension sponsored clinics and short courses.
7. Commercial company publications and reports.
8. Iowa State University and United States Department of Agriculture publications.
9. County extension personnel.
10. Salesmen for manufacturers or wholesalers.
11. Iowa State University specialists.
12. Manufacturers or their technical representatives.
15. Other; specify.
16. Other; specify.

Total number of sources of product information given by the manager has been used as his score on this variable. Range of managers' sources of product information scores is from 2 to 64. The mean of the managers' sources of product information is 8.86 and the standard deviation is
Distribution of managers' sources of product information scores by categories is presented in Table 58.

### Table 58. Distribution of managers' sources of product information scores by categories

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 and below</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>3 - 9</td>
<td>52</td>
<td>53.0</td>
</tr>
<tr>
<td>10 - 16</td>
<td>42</td>
<td>42.9</td>
</tr>
<tr>
<td>17 and above</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 2 - 64

\[ \bar{X} = 8.86 \]

\[ S = 6.62 \]

**Competition measures**

Competition has been operationally defined in terms of the number of similar businesses in the trade area, competition rate, the restriction of the competitive situation and success in competition. Measure for each sub-dimension will be developed in the following.

**Number of similar businesses**

To determine the number of similar businesses in the trade area each respondent was asked:

*How many other businesses with similar major product lines are operating in your trade area?*

Actual number mentioned by the manager was used in the analysis. Range of scores on this variable is from zero to 99. The mean of the total
scores on this variable is 9.30 and the standard deviation is 12.55. Distribution of scores of number of similar businesses in the trade area by categories is presented in Table 59.

**Table 59. Distribution of scores of number of similar businesses in the trade area by categories**

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3</td>
<td>22</td>
<td>22.4</td>
</tr>
<tr>
<td>4 - 7</td>
<td>43</td>
<td>43.9</td>
</tr>
<tr>
<td>8 - 11</td>
<td>9</td>
<td>9.2</td>
</tr>
<tr>
<td>12 and above</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 0 - 99

\[ \bar{X} = 9.30 \]

\[ S = 12.55 \]

**Competition rate** To determine the competition rate as perceived by the manager each respondent was asked:

In general, how would you rate the competition in this trade area?

**Code**

1 = Very strong competition.
2 = Strong competition.
3 = Mild competition.
4 = Weak competition.
5 = Very weak competition.

It is assumed that most of the managers will perceive the situation as highly competitive to show the strength of their businesses. Thus,
perception of very strong competition has been given the lowest score on the continuum and perception of very weak competition has been given the highest score, score 5. Range of managers' perception of competition rate scores is from 1 to 3. The mean of total scores on this variable is 1.87 and the standard deviation is 0.59. The distribution of scores by category appears in Table 60.

Table 60. Distribution of scores of competition rate as perceived by the manager

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>2</td>
<td>63</td>
<td>64.3</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>11.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 1 - 3

\[ \bar{X} = 1.87 \]

\[ S = 0.59 \]

Restrictions of the competitive situation

To determine an individual's perception of restrictions of the competitive situation, each respondent was asked:

How restrictive is this competitive situation on your ability to be a successful manager? Select a number from the categories that best describes your feeling.

1 2 3 4 5 6 7 8 9 10 11

Not restrictive at all

Very restrictive
Individual's response to this question was coded as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not restrictive at all</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6 (2 - 10 not defined for respondent)</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>Very restrictive</td>
</tr>
</tbody>
</table>

It should be mentioned that this variable was measured on a continuum where the least restrictive scored 1 and the highest restrictive scored 11. Range of managers' perception of restrictions of the competitive situation scores is from 1 to 10. The mean of managers' perception of restrictions of the competitive situation scores is 5.38 and the standard deviation is 2.31. Distribution of managers' perception of restriction of the competitive situation scores by categories is presented in Table 61.

Table 61. Distribution of managers' perception of restrictions of the competitive situation scores by categories

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 and below</td>
<td>6</td>
<td>6.2</td>
</tr>
<tr>
<td>3 - 5</td>
<td>46</td>
<td>46.9</td>
</tr>
<tr>
<td>6 - 8</td>
<td>38</td>
<td>38.7</td>
</tr>
<tr>
<td>9 and above</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 1 - 10

\[ \bar{x} = 5.38 \]

\[ s = 2.31 \]
Success in competition  To determine a manager's perception of success in competition in the trade area each respondent was asked:

How successful are you in competing in this situation? Select a number from the categories that best describes your feeling.

1  2  3  4  5  6  7  8  9  10  11

Not doing well at all  Very successful

Individual's response was coded as follows:

Code

1 = 1 Not doing well at all
2 = 2
3 = 3
4 = 4
5 = 5
6 = 6 (2 - 10 not defined for respondent)
7 = 7
8 = 8
9 = 9
10 = 10
11 = 11 Very successful

It should be mentioned that this variable was measured on a continuum where the least scored 1 and the highest scored 11. Range of managers' perception of success in competition scores is from 3 to 11. The mean of managers' perception of success in competition scores is 8.02 and the standard deviation is 1.39. Distribution of managers' perception of success in competition scores by categories is presented in Table 62.
Table 62. Distribution of managers' perception of success in competition scores by categories

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 and below</td>
<td>13</td>
<td>13.3</td>
</tr>
<tr>
<td>7 - 8</td>
<td>51</td>
<td>52.1</td>
</tr>
<tr>
<td>9 - 10</td>
<td>32</td>
<td>32.6</td>
</tr>
<tr>
<td>11 and above</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 3 - 11
\[ \bar{X} = 8.02 \]
\[ S = 1.39 \]

Measures of the output of behavior practices

It has been stated before that the output of behavior practices, that is of management practices, is the efficiency of the business association measured by the association fertilizer sales and its cost per dollar sales. Empirical measures for those variables will be developed in the following.

**Fertilizer sales** As stated before in the general description of the sample the businesses in this study were to have fertilizer as one of their product lines. Also it was stated that a criterion volume level of $15,000.00 of fertilizer sold during the last completed fiscal year for each business was set as the acceptable level. To determine the amount of fertilizer sales of the business letters were sent to each manager requesting an estimation of his volume of fertilizer sales during
the last completed fiscal year of the business. Categories and scores used in the final analysis are as follows:

<table>
<thead>
<tr>
<th>Category of fertilizer sales during the last completed fiscal year of the business</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>From $15,000.00 to $44,999.00</td>
<td>1</td>
</tr>
<tr>
<td>From $45,000.00 to $74,999.00</td>
<td>2</td>
</tr>
<tr>
<td>Over $75,000.00</td>
<td>3</td>
</tr>
</tbody>
</table>

Range of fertilizer sales categories is from 1 to 3. The mean of total scores on this variable is 2.60 and the standard deviation is 0.67. Distribution of scores of fertilizer sales categories is presented in Table 63.

**Table 63. Distribution of scores of fertilizer sales categories**

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>19.4</td>
</tr>
<tr>
<td>3</td>
<td>69</td>
<td>70.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 1 - 3  
$\bar{X} = 2.60$

S = 0.67

**Cost per dollar sales**  
Cost per dollar sales, in dollars, was used as a measure of the efficiency of the business association.

*Lack of sufficient information about amount of fertilizer sales forced the use of fertilizer sales category as measure of fertilizer sales despite its limitations.*
Range of scores on this variable is from 0.034 to 0.220. The mean of total scores on this variable is 0.0964 and the standard deviation is 0.0448. Distribution of cost per dollar sales scores based upon the standard deviation is presented in Table 64.

Table 64. Distribution of cost per dollar sales scores

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.051 and below</td>
<td>13</td>
<td>13.3</td>
</tr>
<tr>
<td>0.052 - 0.096</td>
<td>48</td>
<td>49.0</td>
</tr>
<tr>
<td>0.097 - 0.141</td>
<td>22</td>
<td>22.4</td>
</tr>
<tr>
<td>0.142 and above</td>
<td>15</td>
<td>15.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Range = 0.034 - 0.220

\[ \bar{X} = 0.0964 \]

\[ S = 0.0448 \]

**Measure of relative economic success of the association**

Relative economic success of the association in this study was measured by single variable that is of average net operating revenue. It is assumed, in this study, that the manager must take all inputs as given, then he would maximize profits of the association only by maximizing net operating revenue (94).

**Average net operating revenue** Average net operating revenue, in dollars, was used as a measure of relative economic success of the association. It was computed using the following formula:
Average net operating revenue =

\[
\text{Total commodity savings 1964} + \left( \frac{1964 \text{ total other income}}{1964 \text{ patronage re-funds received from other coops}} \right) + \left( \frac{1965 \text{ total other income}}{1965 \text{ patronage re-funds received from other coops}} \right)
\]

Range of scores on this variable is from 273 to 10,583. The mean of total scores on this variable is 1972.59 and the standard deviation is 1566.93. Distribution of average net operating revenue scores based upon the standard deviation is presented in Table 65.

Table 65. Distribution of average net operating revenue scores

<table>
<thead>
<tr>
<th>Score category</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>406 and below</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>407 - 1973</td>
<td>66</td>
<td>67.3</td>
</tr>
<tr>
<td>1974 - 3541</td>
<td>17</td>
<td>17.4</td>
</tr>
<tr>
<td>3542 and above</td>
<td>13</td>
<td>13.3</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Range = 273 - 10,583  
\( \bar{x} = 1972.59 \)  
\( s = 1566.93 \)

*Scores of this variable were coded to nearest 100; 10's not recorded.

Statistical Analysis*

The particular statistical techniques used in the statistical analysis for this thesis are zero-order correlation, multiple correlation, multiple linear regression, and F test.

*Description of the statistical techniques used in this thesis are presented in Snedecor and Cochran (88b).
FINDINGS

Introduction

In the preceding chapters, the general, the sub-general and the specific hypotheses have been derived and measures designed to operationalize the concepts interrelated by these hypotheses have been described. In this chapter empirical hypotheses will be stated and tested for statistical significance. Inferences concerning the validity of the general and sub-general hypotheses will be made from these statistical tests.

Generally, the procedure to be followed in this chapter will be to state the general hypotheses, with the empirical hypotheses used to test each of the general hypotheses. Also, statement of the null hypothesis and the results of the statistical tests of significance will be presented with each empirical hypothesis.

Statements and Tests of General and Empirical Hypotheses

General hypothesis 1: There will be a relationship between a manager's attitudes and his management performance (or behavior).

Individual orientation toward profit

E. H. 1: There will be a positive relationship between a manager's score on the profit scale and his management general planning and decision making performance score. This hypothesis stated in the null form is:

There is no positive relationship between a manager's score on the profit scale and his management general planning and decision making performance score.

*Empirical hypothesis will hereinafter be indicated as E. H.
scale and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0165, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E.H. 2: There will be a positive relationship between a manager's score on the profit scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the profit scale and his management organizing and staffing performance score. The computed coefficient of correlation is -0.2148, which is statistically significant at the 0.05 level of probability but not in the hypothesized direction. Thus the null hypothesis is not refuted. These data do not support the original proposition.

E. H. 3: There will be a positive relationship between a manager's score on the profit scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the profit scale and his management directing and leading performance score. The computed coefficient of correlation is 0.1302, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 4: There will be a positive relationship between a manager's score on the profit scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the profit
scale and his management coordination and communication performance score. The computed coefficient of correlation is 0.1106, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 5: There will be a positive relationship between a manager's score on the profit scale and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the profit scale and his management controlling performance score. The computed coefficient of correlation is 0.1185, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Attitude toward individualism

E. H. 6: There will be a positive relationship between a manager's score on the individualism scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0526, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 7: There will be a positive relationship between a manager's score on the individualism scale and his management organizing and
staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the individualism scale and his management organizing and staffing performance score. The computed coefficient of correlation is -0.1899, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E.H. 8: There will be a positive relationship between a manager's score on the individualism scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the individualism scale and his management directing and leading performance score. The computed coefficient of correlation is -0.0268, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 9: There will be a positive relationship between a manager's score on the individualism scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the individualism scale and his management coordination and communication performance score. The computed coefficient of correlation is 0.0208, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 10: There will be a positive relationship between a manager's score on the individualism scale and his management coordinating and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the individualism scale and his management coordinating and communication performance score. The computed coefficient of correlation is 0.0208, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
score on the individualism scale and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the individualism scale and his management controlling performance score. The computed coefficient of correlation is -0.1501, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

**Attitude toward independence**

E. H. 11: There will be a positive relationship between a manager's score on the independence scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the independence scale and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0139, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 12: There will be a positive relationship between a manager's score on the independence scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the independence scale and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0047, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original
propo$ision.

E. H. 13: There will be a positive relationship between a manager's score on the independence scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the independence scale and his management directing and leading performance score. The computed coefficient of correlation is -0.0755, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 14: There will be a positive relationship between a manager's score on the independence scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the independence scale and his management coordination and communication performance score. The computed coefficient of correlation is 0.2154, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 15: There will be a positive relationship between a manager's score on the independence scale and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the independence scale and his management controlling performance score. The computed coefficient of correlation is -0.0334, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
Attitude toward management orientation

E. H. 16: There will be a positive relationship between a manager's score on the management orientation scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the management orientation scale and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1691, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 17: There will be a positive relationship between a manager's score on the management orientation scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the management orientation scale and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0196, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 18: There will be a positive relationship between a manager's score on the management orientation scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the management orientation scale and his management directing and leading performance score. The computed coefficient of correlation is 0.0009, which is not statistically significant at the 0.05 level of probability.
The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 19: There will be a positive relationship between a manager's score on the management orientation scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the management orientation scale and his management coordination and communication performance score. The computed coefficient of correlation is 0.0067, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 20: There will be a positive relationship between a manager's score on the management orientation scale and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the management orientation scale and his management controlling performance score. The computed coefficient of correlation is 0.0712, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Job definition

E. H. 21: There will be a positive relationship between a manager's score on the job definition scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the job definition scale and his management general planning and decision
making performance score. The computed coefficient of correlation is 0.2489, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 22: There will be a positive relationship between a manager's score on the job definition scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the job definition scale and his management organizing and staffing performance score. The computed coefficient of correlation is 0.2372, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 23: There will be a positive relationship between a manager's score on the job definition scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the job definition scale and his management directing and leading performance score. The computed coefficient of correlation is 0.0487, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 24: There will be a positive relationship between a manager's score on the job definition scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the job definition scale and his management coordination and communication
performance score. The computed coefficient of correlation is 0.0748, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 25: There will be a positive relationship between a manager's score on the job definition scale and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the job definition scale and his management controlling performance score. The computed coefficient of correlation is 0.1707, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Attitude toward progressivism

E. H. 26: There will be a positive relationship between a manager's score on the progressivism scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the progressivism scale and his management general planning and decision making performance score. The computed coefficient of correlation is 0.2713, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 27: There will be a positive relationship between a manager's score on the progressivism scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There
is no positive relationship between a manager's score on the progressivest scale and his management organizing and staffing performance scale. The computed coefficient of correlation is 0.3372, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 28: There will be a positive relationship between a manager's score on the progressivism scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the progressivism scale and his management directing and leading performance score. The computed coefficient of correlation is -0.0588, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 29: There will be a positive relationship between a manager's score on the progressivism scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the progressivism scale and his management coordination and communication performance score. The computed coefficient of correlation is 0.1657, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 30: There will be a positive relationship between a manager's score on the progressivism scale and his management controlling performance score. This hypothesis stated in the null form is: There is no
positive relationship between a manager's score on the progressivism scale and his management controlling performance score. The computed coefficient of correlation is 0.1536, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Risk preference

E. H. 31: There will be a positive relationship between a manager's score on the risk preference scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the risk preference scale and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1957, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 32: There will be a positive relationship between a manager's score on the risk preference scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the risk preference scale and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0672, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 33: There will be a positive relationship between a manager's
score on the risk preference scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the risk preference scale and his management directing and leading performance score. The computed coefficient of correlation is -0.0419, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 34: There will be a positive relationship between a manager's score on the risk preference scale and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the risk preference scale and his management coordination and communication performance score. The computed coefficient of correlation is 0.3215, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 35: There will be a positive relationship between a manager's score on the risk preference scale and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's score on the risk preference scale and his management controlling performance score. The computed coefficient of correlation is 0.1550, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
Tradition

E. H. 36: There will be a negative relationship between a manager's score on the traditional scale and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no negative relationship between a manager's score on the traditional scale and his management general planning and decision making performance score. The computed coefficient of correlation is 0.2990*, which is statistically significant at the 0.05 level of probability. Thus the null hypothesis is refuted. These data do support the original proposition.

E. H. 37: There will be a negative relationship between a manager's score on the traditional scale and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no negative relationship between a manager's score on the traditional scale and his management organizing and staffing performance score. The computed coefficient of correlation is 0.2383, which is statistically significant at the 0.05 level of probability. Thus the null hypothesis is refuted. These data do support the original proposition.

E. H. 38: There will be a negative relationship between a manager's score on the traditional scale and his management directing and leading performance score. This hypothesis stated in the null form is: There is no negative relationship between a manager's score on the traditional scale and his management directing and leading performance score. It may be noted that the r value reported is positive. However, the reader is reminded that the scoring on traditionalism was reversed (see discussion on page 220) and therefore the positive r value in fact does indicate the degree of the negative relationship between traditionalism and the type of management behavior indicated in the hypothesis. These comments also are applicable to E. H's 37, 38, 39 and 40.
and his management directing and leading performance score. The computed
coefficient of correlation is 0.1381, which is not statistically signifi­
cant at 0.05 level of probability. The null hypothesis is not refuted.
These data do not support the original proposition.

E. H. 39: There will be a negative relationship between a manager's
score on the traditional scale and his management coordination and communi­
cation performance score. This hypothesis stated in the null form is:
There is no negative relationship between a manager's score on the tradi­
tional scale and his management coordination and communication performance
score. The computed coefficient of correlation is 0.3429, which is
statistically significant at 0.05 level of probability. Thus the null
hypothesis is refuted. These data do support the original proposition.

E. H. 40: There will be a negative relationship between a manager's
score on the traditional scale and his management controlling performance
score. This hypothesis stated in the null form is: There is no negative
relationship between a manager's score on the traditional scale and his
management controlling performance score. The computed coefficient of
correlation is 0.1357, which is not statistically significant at the 0.05
level of probability. The null hypothesis is not refuted. These data
do not support the original proposition.

General hypothesis 2: There will be a relationship between
a manager's knowledge and his management behavior.

Years of formal education

E. H. 41: There will be a positive relationship between a manager's
number of years of formal education and his management general planning
and decision making performance score. This hypothesis stated in the null
form is: There is no positive relationship between a manager's number of years of formal education and his management general planning and decision making performance score. The computed coefficient of correlation is 0.2113, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 42: There will be a positive relationship between a manager's number of years of formal education and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of formal education and his management organizing and staffing performance score. The computed coefficient of correlation is 0.2152, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 43: There will be a positive relationship between a manager's number of years of formal education and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of formal education and his management directing and leading performance score. The computed coefficient of correlation is 0.1128, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 44: There will be a positive relationship between a manager's number of years of formal education and his management coordination and communication performance score. This hypothesis stated in the null form
is: There is no positive relationship between a manager's number of years of formal education and his management coordination and communication performance score. The computed coefficient of correlation is 0.2370, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 45: There will be a positive relationship between a manager's number of years of formal education and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of formal education and his management controlling performance score. The computed coefficient of correlation is 0.3460, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

Years of vocational agriculture

E. H. 46: There will be a positive relationship between a manager's number of years of vocational agriculture and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of vocational agriculture and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1607, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 47: There will be a positive relationship between a manager's
number of years of vocational agriculture and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of vocational agriculture and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0283, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 48: There will be a positive relationship between a manager's number of years of vocational agriculture and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of vocational agriculture and his management directing and leading performance score. The computed coefficient of correlation is -0.0070, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 49: There will be a positive relationship between a manager's number of years of vocational agriculture and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of vocational agriculture and his management coordination and communication performance score. The computed coefficient of correlation is 0.1209, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 50: There will be a positive relationship between a manager's number of years of vocational agriculture and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of vocational agriculture and his management controlling performance score. The computed coefficient of correlation is 0.1483, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Management training

E. H. 51: There will be a positive relationship between a manager's management training score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management training score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.2032, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 52: There will be a positive relationship between a manager's management training score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management training score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.1818, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 53: There will be a positive relationship between a manager's management training score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management training score and his management directing and leading performance score. The computed coefficient of correlation is -0.0215, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original propositions.

E. H. 54: There will be a positive relationship between a manager's management training score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management training score and his management coordination and communication performance score. The computed coefficient of correlation is 0.0265, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 55: There will be a positive relationship between a manager's management training score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management training score and his management controlling performance score. The computed coefficient of correlation is 0.0858, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
Specialized training

E. H. 56: There will be a positive relationship between a manager's specialized training score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's specialized training score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.2898, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 57: There will be a positive relationship between a manager's specialized training score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's specialized training score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0938, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 58: There will be a positive relationship between a manager's specialized training score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's specialized training score and his management directing and leading performance score. The computed coefficient of correlation is 0.0785, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 59: There will be a positive relationship between a manager's specialized training score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's specialized training score and his management coordination and communication performance score. The computed coefficient of correlation is 0.0980, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 60: There will be a positive relationship between a manager's specialized training score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's specialized training score and his management controlling performance score. The computed coefficient of correlation is 0.2056, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

Years of management experience

E. H. 61: There will be a positive relationship between a manager's number of years of management experience and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of management experience and his management general planning and decision making performance score. The computed coefficient of correlation is -0.2118, which is statistically significant at the 0.05 level of probability but it indicates negative relationship. Thus the
null hypothesis is not refuted. These data do not support the original proposition.

E. H. 62: There will be a positive relationship between a manager's number of years of management experience and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of management experience and his management organizing and staffing performance score. The computed coefficient of correlation is -0.0370, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 63: There will be a positive relationship between a manager's number of years of management experience and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of management experience and his management directing and leading performance score. The computed coefficient of correlation is 0.0614, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 64: There will be a positive relationship between a manager's number of years of management experience and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of management experience and his management coordination and communication performance score. The computed coefficient of correlation is
-0.1050, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 65: There will be a positive relationship between a manager's number of years of management experience and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years of management experience and his management controlling performance score. The computed coefficient of correlation is -0.1446, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Farm work experience

E. H. 66: There will be a positive relationship between a manager's farm work experience score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's farm work experience score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0621, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 67: There will be a positive relationship between a manager's farm work experience score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's farm work experience score
and his management organizing and staffing performance score. The computed coefficient of correlation is -0.1156, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 68: There will be a positive relationship between a manager's farm work experience score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's farm work experience score and his management directing and leading performance score. The computed coefficient of correlation is 0.1074, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 69: There will be a positive relationship between a manager's farm work experience score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's farm work experience score and his management coordination and communication performance score. The computed coefficient of correlation is 0.0294, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 70: There will be a positive relationship between a manager's farm work experience score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's farm work experience score and his management controlling performance score. The computed coefficient of
correlation is -0.1339, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

**Years as the manager of the cooperative association**

E. H. 71: There will be a positive relationship between a manager's number of years as the manager of the cooperative association and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years as the manager of the cooperative association and his management general planning and decision making performance score. The computed coefficient of correlation is -0.2554, which is statistically significant at the 0.05 level of probability but it indicates a negative relationship. Thus the null hypothesis is not refuted. These data do not support the original proposition.

E. H. 72: There will be a positive relationship between a manager's number of years as the manager of the cooperative association and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years as the manager of the cooperative association and his management organizing and staffing performance score. The computed coefficient of correlation is -0.1311, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 73: There will be a positive relationship between a manager's number of years as the manager of the cooperative association and his
management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years as the manager of the cooperative association and his management directing and leading performance score. The computed coefficient of correlation is 0.0511, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 74: There will be a positive relationship between a manager's number of years as the manager of the cooperative association and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years as the manager of the cooperative association and his management coordination and communication performance score. The computed coefficient of correlation is -0.0689, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 75: There will be a positive relationship between a manager's number of years as the manager of the cooperative association and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of years as the manager of the cooperative association and his management controlling performance score. The computed coefficient of correlation is -0.2159, which is statistically significant at the 0.05 level of probability but it indicates negative relationship. Thus the null hypothesis is not refuted. These data do not support the original proposition.
Chemical knowledge

E. H. 76: There will be a positive relationship between a manager's chemical knowledge score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's chemical knowledge score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0593, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 77: There will be a positive relationship between a manager's chemical knowledge score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's chemical knowledge score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.2121, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 78: There will be a positive relationship between a manager's chemical knowledge score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's chemical knowledge score and his management directing and leading performance score. The computed coefficient of correlation is -0.0037, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 79: There will be a positive relationship between a manager's chemical knowledge score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's chemical knowledge score and his management coordination and communication performance score. The computed coefficient of correlation is 0.1081, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 80: There will be a positive relationship between a manager's chemical knowledge score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's chemical knowledge score and his management controlling performance score. The computed coefficient of correlation is 0.3699, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

Fertilizer knowledge

E. H. 81: There will be a positive relationship between a manager's fertilizer knowledge score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's fertilizer knowledge score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1338, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original
E. H. 82: There will be a positive relationship between a manager's fertilizer knowledge score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's fertilizer knowledge score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.1798, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 83: There will be a positive relationship between a manager's fertilizer knowledge score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's fertilizer knowledge score and his management directing and leading performance score. The computed coefficient of correlation is 0.0014, which is not statistically significant at the 0.05 level of probability. These data do not support the original proposition.

E. H. 84: There will be a positive relationship between a manager's fertilizer knowledge score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's fertilizer knowledge score and his management coordination and communication performance score. The computed coefficient of correlation is 0.1610, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 85: There will be a positive relationship between a manager's
fertilizer knowledge score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's fertilizer knowledge score and his management controlling performance score. The computed coefficient of correlation is 0.1612, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Finance knowledge

E. H. 86: There will be a positive relationship between a manager's finance knowledge score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's finance knowledge score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.4065, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 87: There will be a positive relationship between a manager's finance knowledge score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's finance knowledge score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.1433, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 88: There will be a positive relationship between a manager's finance knowledge score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's finance knowledge score and his management directing and leading performance score. The computed coefficient of correlation is 0.0459, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 89: There will be a positive relationship between a manager's finance knowledge score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's finance knowledge score and his management coordination and communication performance score. The computed coefficient of correlation is 0.3614, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 90: There will be a positive relationship between a manager's finance knowledge score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's finance knowledge score and his management controlling performance score. The computed coefficient of correlation is 0.3155, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.
Knowledge about money value

E. H. 91: There will be a positive relationship between a manager's knowledge about money value score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about money value score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0701, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 92: There will be a positive relationship between a manager's knowledge about money value score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about money value score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0002, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 93: There will be a positive relationship between a manager's knowledge about money value score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about money value score and his management directing and leading performance score. The computed coefficient of correlation is -0.0689, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 94: There will be a positive relationship between a manager's knowledge about money value score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about money value score and his management coordination and communication performance score. The computed coefficient of correlation is 0.0819, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 95: There will be a positive relationship between a manager's knowledge about money value score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about money value score and his management controlling performance score. The computed coefficient of correlation is -0.0694, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Knowledge about profit building

E. H. 96: There will be a positive relationship between a manager's knowledge about profit building score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about profit building score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.2166, which is statistically significant at the 0.05 level of
probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 97: There will be a positive relationship between a manager's knowledge about profit building score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about profit building score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.1702, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 98: There will be a positive relationship between a manager's knowledge about profit building score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about profit building score and his management directing and leading performance score. The computed coefficient of correlation is 0.0655, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 99: There will be a positive relationship between a manager's knowledge about profit building score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about profit building score and his management coordination and communication performance score. The computed coefficient of correlation is 0.2247,
which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 100: There will be a positive relationship between a manager's knowledge about profit building score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about profit building score and his management controlling performance score. The computed coefficient of correlation is 0.2780, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

Knowledge about margin determination

E. H. 101: There will be a positive relationship between a manager's knowledge about margin determination score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about margin determination score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1494, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 102: There will be a positive relationship between a manager's knowledge about margin determination score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about
margin determination score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.1108, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 103: There will be a positive relationship between a manager's knowledge about margin determination score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about margin determination score and his management directing and leading performance score. The computed coefficient of correlation is -0.0582, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 104: There will be a positive relationship between a manager's knowledge about margin determination score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's knowledge about margin determination score and his management coordination and communication performance score. The computed coefficient of correlation is 0.2426, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 105: There will be a positive relationship between a manager's knowledge about margin determination score and his management controlling performance score. This hypothesis stated in the null form is: There is
no positive relationship between a manager's knowledge about margin
determination score and his management controlling performance score. The
computed coefficient of correlation is 0.1479, which is not statistically
significant at the 0.05 level of probability. The null hypothesis is not
refuted. These data do not support the original proposition.

General hypothesis 3: There will be a relationship between a
manager's job satisfaction and his management behavior.

Job satisfaction

E. H. 106: There will be a positive relationship between a manager's
job satisfaction score and his management general planning and decision
making performance score. This hypothesis stated in the null form is:
There is no positive relationship between a manager's job satisfaction
score and his management general planning and decision making performance
score. The computed coefficient of correlation is 0.0351, which is not
statistically significant at the 0.05 level of probability. The null
hypothesis is not refuted. These data do not support the original proposi-
tion.

E. H. 107: There will be a positive relationship between a manager's
job satisfaction score and his management organizing and staffing per-
formance score. This hypothesis stated in the null form is: There is
no positive relationship between a manager's job satisfaction score and
his management organizing and staffing performance score. The computed
coefficient of correlation is 0.0317, which is not statistically signifi-
cant at the 0.05 level of probability. The null hypothesis is not refuted.
These data do not support the original proposition.
E. H. 108: There will be a positive relationship between a manager's job satisfaction score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's job satisfaction score and his management directing and leading performance score. The computed coefficient of correlation is 0.1763, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 109: There will be a positive relationship between a manager's job satisfaction score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's job satisfaction score and his management coordination and communication performance score. The computed coefficient of correlation is -0.2195, which is statistically significant at the 0.05 level of probability but not in the hypothesized direction. Thus the null hypothesis is not refuted. These data do not support the original proposition.

E. H. 110: There will be a positive relationship between a manager's job satisfaction score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's job satisfaction score and his management controlling performance score. The computed coefficient of correlation is 0.0957, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
General hypothesis 4: There will be a relationship between a manager's sources of information and his management behavior.

Sources of management information

E. H. 111: There will be a positive relationship between a manager's number of sources of management information and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of management information and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1109, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 112: There will be a positive relationship between a manager's number of sources of management information and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of management information and his management organizing and staffing performance score. The computed coefficient of correlation is 0.2881, which is statistically significant at both the 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 113: There will be a positive relationship between a manager's number of sources of management information and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of
E. H. 114: There will be a positive relationship between a manager's number of sources of management information and his management directing and leading performance score. The computed coefficient of correlation is -0.1601, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 115: There will be a positive relationship between a manager's number of sources of management information and his management coordination and communication performance score. The computed coefficient of correlation is -0.0176, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 116: There will be a positive relationship between a manager's number of sources of management information and his management controlling performance score. The computed coefficient of correlation is -0.0200, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Sources of product information

E. H. 116: There will be a positive relationship between a manager's number of sources of product information and his management general
planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of product information and his management general planning and decision making performance score. The computed coefficient of correlation is 0.0179, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 117: There will be a positive relationship between a manager's number of sources of product information and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of product information and his management organizing and staffing performance score. The computed coefficient of correlation is 0.0329, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 118: There will be a positive relationship between a manager's number of sources of product information and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of product information and his management directing and leading performance score. The computed coefficient of correlation is 0.2027, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 119: There will be a positive relationship between a manager's number of sources of product information and his management coordination
and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of product information and his management coordination and communication performance score. The computed coefficient of correlation is 0.1484, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 120: There will be a positive relationship between a manager's number of sources of product information and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's number of sources of product information and his management controlling performance score. The computed coefficient of correlation is -0.0261, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

General hypothesis 5: There will be a relationship between competition in the market areas serviced by the association and the managers of the association management behavior.

Number of similar businesses

E. H. 121: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the
association management general planning and decision making performance score. The computed coefficient of correlation is -0.0575, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 122: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management organizing and staffing performance score. The computed coefficient of correlation is 0.3495, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 123: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management directing and leading performance score. The computed coefficient of correlation is -0.0382, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 124: There will be a positive relationship between the number
of similar businesses in the market areas serviced by the association and the manager of the association management coordination and communication performance score. This hypothesis stated in the null form is: there is no positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management coordination and communication performance score. The computed coefficient of correlation is 0.1815, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 125: There will be a positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management controlling performance score. This hypothesis stated in the null form is: there is no positive relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management controlling performance score. The computed coefficient of correlation is 0.1297, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

Competition rate

E. H. 126: There will be a positive relationship between a manager's perception of competition rate score and his management general planning and decision making performance score. This hypothesis stated in the null form is: there is no positive relationship between a manager's perception of competition rate score and his management general planning and decision
making performance score. The computed coefficient of correlation is -0.1091, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 127: There will be a positive relationship between a manager's perception of competition rate score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of competition rate score and his management organizing and staffing performance score. The computed coefficient of correlation is -0.0410, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 128: There will be a positive relationship between a manager's perception of competition rate score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of competition rate score and his management directing and leading performance score. The computed coefficient of correlation is -0.0034, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 129: There will be a positive relationship between a manager's perception of competition rate score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of
competition rate score and his management coordination and communication performance score. The computed coefficient of correlation is -0.0106, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 130: There will be a positive relationship between a manager's perception of competition rate score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of competition rate score and his management controlling performance score. The computed coefficient of correlation is -0.0850, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

The restrictions of the competitive situation

E. H. 131: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of the restrictions of the competitive situation score and his management general planning and decision making performance score. The computed coefficient of correlation is -0.1208, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 132: There will be a positive relationship between a manager's
perception of the restrictions of the competitive situation score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of the restrictions of the competitive situation score and his management organizing and staffing performance score. The computed coefficient of correlation is -0.1707, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 133: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of the restrictions of the competitive situation score and his management directing and leading performance score. The computed coefficient of correlation is -0.1669, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 134: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of the restrictions of the competitive situation score and his management coordination and communication performance score. The computed coefficient of correlation is -0.1923, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
E. H. 135: There will be a positive relationship between a manager's perception of the restrictions of the competitive situation score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of the restrictions of the competitive situation score and his management controlling performance score. The computed coefficient of correlation is -0.1987, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

**Success in competition**

E. H. 136: There will be a positive relationship between a manager's perception of success in competition score and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of success in competition score and his management general planning and decision making performance score. The computed coefficient of correlation is 0.1585, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 137: There will be a positive relationship between a manager's perception of success in competition score and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of success in competition score and his management organizing and staffing performance score. The computed coefficient of correlation is 0.1814,
which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 138: There will be a positive relationship between a manager's perception of success in competition score and his management directing and leading performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of success in competition score and his management directing and leading performance score. The computed coefficient of correlation is 0.1800, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 139: There will be a positive relationship between a manager's perception of success in competition score and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of success in competition score and his management coordination and communication performance score. The computed coefficient of correlation is 0.1529, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 140: There will be a positive relationship between a manager's perception of success in competition score and his management controlling performance score. This hypothesis stated in the null form is: There is no positive relationship between a manager's perception of success in competition score and his management controlling performance score. The
computed coefficient of correlation is 0.1291, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

**General hypothesis 6:** There will be a relationship between a manager's management behavior practices and the efficiency of the business firm or association.

**Fertilizer sales**

E. H. 141: There will be a positive relationship between a manager's management general planning and decision making performance score and his farmer cooperative association fertilizer sales score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management general planning and decision making performance score and his farmer cooperative association fertilizer sales score. The computed coefficient of correlation is 0.1583, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 142: There will be a positive relationship between a manager's management organizing and staffing performance score and his farmer cooperative association fertilizer sales score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management organizing and staffing performance score and his farmer cooperative association fertilizer sales score. The computed coefficient of correlation is 0.2462, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.
E. H. 143: There will be a positive relationship between a manager's management directing and leading performance score and his farmer cooperative association fertilizer sales score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management directing and leading performance score and his farmer cooperative association fertilizer sales score. The computed coefficient of correlation is 0.0968, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 144: There will be a positive relationship between a manager's management coordination and communication performance score and his farmer cooperative association fertilizer sales score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management coordination and communication performance score and his farmer cooperative association fertilizer sales score. The computed coefficient of correlation is 0.2646, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 145: There will be a positive relationship between a manager's management controlling performance score and his farmer cooperative association fertilizer sales score. This hypothesis stated in the null form is: There is no positive relationship between a manager's management controlling performance score and his farmer cooperative association fertilizer sales score. The computed coefficient of correlation is 0.1794, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support
the original proposition.

Cost per dollar sales

E. H. 146: There will be a negative relationship between a manager's management general planning and decision making performance score and cost per dollar sales in dollars in the farmer cooperative association. This hypothesis stated in the null form is: There is no negative relationship between a manager's management general planning and decision making performance score and cost per dollar sales in dollars in the farmer cooperative association. The computed coefficient of correlation is 0.0356, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 147: There will be a negative relationship between a manager's management organizing and staffing performance score and cost per dollar sales in dollars in the farmer cooperative association. This hypothesis stated in the null form is: There is no negative relationship between a manager's management organizing and staffing performance score and cost per dollar sales in dollars in the farmer cooperative association. The computed coefficient of correlation is 0.4008, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is not refuted since the coefficient of correlation indicates positive relationship which is in contradiction with the assumed hypothesis. Thus these data do not support the original proposition.

E. H. 148: There will be a negative relationship between a manager's management directing and leading performance score and cost per dollar sales in dollars in the farmer cooperative association.
sales in dollars in the farmer cooperative association. This hypothesis stated in the null form is: There is no negative relationship between a manager's management directing and leading performance score and cost per dollars sales in dollars in the farmer cooperative association. The computed coefficient of correlation is 0.1194, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 149: There will be a negative relationship between a manager's management coordination and communication performance score and cost per dollar sales in dollars in the farmer cooperative association. This hypothesis stated in the null form is: There is no negative relationship between a manager's management coordination and communication performance score and cost per dollar sales in dollars in the farmer cooperative association. The computed coefficient of correlation is 0.0985, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E, H, 150: There will be a negative relationship between a manager's management controlling performance score and cost per dollar sales in dollars in the farmer cooperative association. This hypothesis stated in the null form is: There is no negative relationship between a manager's management controlling performance score and cost per dollar sales in dollars in the farmer cooperative association. The computed coefficient of correlation is 0.2680, which is statistically significant at the 0.05 level of probability but has a positive sign. The null hypothesis is not refuted. These data do not support the original proposition.
General hypothesis 7: There will be a relationship between a manager's management behavior practices and relative economic success of the business firm or association.

Average net operating revenue

E. H. 151: There will be a positive relationship between a manager's management general planning and decision making performance score and his farmer cooperative association average net operating revenue in dollars. This hypothesis stated in the null form is: There is no positive relationship between a manager's management general planning and decision making performance score and his farmer cooperative association average net operating revenue in dollars. The computed coefficient of correlation is 0.2324, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 152: There will be a positive relationship between a manager's management organizing and staffing performance score and his farmer cooperative association average net operating revenue in dollars. This hypothesis stated in the null form is: There is no positive relationship between a manager's management organizing and staffing performance score and his farmer cooperative association average net operating revenue in dollars. The computed coefficient of correlation is 0.3473, which is statistically significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 153: There will be a positive relationship between a manager's
management directing and leading performance score and his farmer cooperative association average net operating revenue in dollars. This hypothesis stated in the null form is: There is no positive relationship between a manager's management directing and leading performance score and his farmer cooperative association average net operating revenue in dollars. The computed coefficient of correlation is 0.1023, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.

E. H. 154: There will be a positive relationship between a manager's management coordination and communication performance score and his farmer cooperative association average net operating revenue in dollars. This hypothesis stated in the null form is: There is no positive relationship between a manager's management coordination and communication performance score and his farmer cooperative association average net operating revenue in dollars. The computed coefficient of correlation is 0.2530, which is statistically significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition.

E. H. 155: There will be a positive relationship between a manager's management controlling performance score and his farmer cooperative association average net operating revenue in dollars. This hypothesis stated in the null form is: There is no positive relationship between a manager's management controlling performance score and his farmer cooperative association average net operating revenue in dollars. The computed coefficient of correlation is 0.1376, which is not statistically significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition.
Multiple relationships

General hypothesis 8*: There will be a relationship between a manager's selected personal variables, selected situational variables and his management behavior.

E. H. 156: There will be a relationship between 28** manager's selected personal variables, selected situational variables and his management general planning and decision making performance score. This hypothesis stated in the null form is: There is no relationship between 28 manager's selected personal variables, selected situational variables and management general planning and decision making performance score. The computed $F$ value is 2.1164 with 28 and 69 degrees of freedom. This is significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition. Data relevant to this hypothesis are presented in Tables 66 and 67.

Table 66. Analysis of variance relevant to data of E. H. 156

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>$F$ - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>28</td>
<td>39.4497</td>
<td>1.4089</td>
<td>2.1164</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>45.9338</td>
<td>0.6657</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>85.3835</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$R^2 = 0.46$  
$F$ is significant at both levels 0.05 & 0.01.  
Standard error = 0.8159

*General hypothesis 8 is a verbal expression of Equation 6 in the developed analytical model.

**The 28 variables are the same personal and situational variables previously presented throughout this thesis.
Table 67. Selected statistics from regression estimates of Equation 6* as partially tested by E. H. 156

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-3.8916</td>
<td>1.6894</td>
</tr>
<tr>
<td>7</td>
<td>-0.0016</td>
<td>0.0091</td>
</tr>
<tr>
<td>8</td>
<td>0.0021</td>
<td>0.0019</td>
</tr>
<tr>
<td>9</td>
<td>0.0057</td>
<td>0.0041</td>
</tr>
<tr>
<td>10</td>
<td>0.0062</td>
<td>0.0049</td>
</tr>
<tr>
<td>11</td>
<td>0.0039</td>
<td>0.0031</td>
</tr>
<tr>
<td>12</td>
<td>0.0031</td>
<td>0.0057</td>
</tr>
<tr>
<td>13</td>
<td>-0.0017</td>
<td>0.0115</td>
</tr>
<tr>
<td>14</td>
<td>0.0031</td>
<td>0.0109</td>
</tr>
<tr>
<td>15</td>
<td>-0.0376</td>
<td>0.0618</td>
</tr>
<tr>
<td>16</td>
<td>0.0023</td>
<td>0.0600</td>
</tr>
<tr>
<td>17</td>
<td>-0.0357</td>
<td>0.0173</td>
</tr>
<tr>
<td>18</td>
<td>0.0036</td>
<td>0.0140</td>
</tr>
<tr>
<td>19</td>
<td>0.0778</td>
<td>0.0512</td>
</tr>
<tr>
<td>20</td>
<td>-0.0237</td>
<td>0.0489</td>
</tr>
<tr>
<td>21</td>
<td>0.3851</td>
<td>0.2233</td>
</tr>
<tr>
<td>22</td>
<td>-0.0305</td>
<td>0.0744</td>
</tr>
<tr>
<td>23</td>
<td>0.0606</td>
<td>0.0540</td>
</tr>
<tr>
<td>24</td>
<td>0.0825</td>
<td>0.0258</td>
</tr>
<tr>
<td>25</td>
<td>0.0290</td>
<td>0.0569</td>
</tr>
<tr>
<td>26</td>
<td>0.0129</td>
<td>0.0789</td>
</tr>
<tr>
<td>27</td>
<td>0.0349</td>
<td>0.0933</td>
</tr>
<tr>
<td>28</td>
<td>-0.0018</td>
<td>0.0082</td>
</tr>
<tr>
<td>29</td>
<td>0.0080</td>
<td>0.0098</td>
</tr>
<tr>
<td>30</td>
<td>0.0096</td>
<td>0.0138</td>
</tr>
<tr>
<td>31</td>
<td>-0.0047</td>
<td>0.0085</td>
</tr>
<tr>
<td>32</td>
<td>-0.0965</td>
<td>0.1674</td>
</tr>
<tr>
<td>33</td>
<td>0.0466</td>
<td>0.0464</td>
</tr>
<tr>
<td>34</td>
<td>0.0679</td>
<td>0.0705</td>
</tr>
</tbody>
</table>

*Equation 6 in the developed analytical model.

The variables shown in Table 67 are as follows:

$X_1 = $ Management general planning and decision making performance.

$X_7 = $ Attitude toward profit accumulation.

$X_8 = $ Perception of job.

$X_9 = $ Attitude toward assuming risk.
X_{10} = \text{Attitude toward progressivism.}
X_{11} = \text{Attitude toward individualism.}
X_{12} = \text{Attitude toward traditional means of management.}
X_{13} = \text{Attitude toward independence.}
X_{14} = \text{Attitude toward management orientation.}
X_{15} = \text{Years of formal education.}
X_{16} = \text{Years of vocational agriculture.}
X_{17} = \text{Years as manager of the farmer cooperative.}
X_{18} = \text{Management experience.}
X_{19} = \text{Management training.}
X_{20} = \text{Farm work experience.}
X_{21} = \text{Any specialized training.}
X_{22} = \text{Chemical knowledge.}
X_{23} = \text{Fertilizer knowledge.}
X_{24} = \text{Finance knowledge.}
X_{25} = \text{Knowledge about money value.}
X_{26} = \text{Knowledge about profit building.}
X_{27} = \text{Knowledge about margin determination.}
X_{28} = \text{Job satisfaction.}
X_{29} = \text{Sources of management information.}
X_{30} = \text{Sources of product information.}
X_{31} = \text{Number of similar businesses in the trade area.}
X_{32} = \text{Competition rate.}
X_{33} = \text{Restrictions of the competitive situation.}
X_{34} = \text{Perception of success in competition.}
An estimate of the management general planning and decision making performance may be secured by substituting appropriate values of \( X_7 \) through \( X_{34} \) in the prediction equation.

\[
Y = a + b_1X_7 + b_2X_8 + \ldots + b_{28}X_{34}
\]

where "a" is constant and \( b_1 \) through \( b_{28} \) are respective coefficients of regression of \( X_7 \) through \( X_{34} \). The value of regression coefficients have been determined earlier (Table 67). After solving for the "a" value, sometimes called the "Y-intercept," the prediction equation is obtained.

\[
Y = (-3.8916) + (-0.0016)X_7 + (0.0021)X_8 + (0.0057)X_9 + (0.0062)X_{10} + (0.0039)X_{11} + (0.0031)X_{12} + (-0.0017)X_{13} + (0.0031)X_{14} + (-0.0376)X_{15} + (0.0023)X_{16} + (-0.0357)X_{17} + (0.0036)X_{18} + (0.0778)X_{19} + (-0.0237)X_{20} + (0.3851)X_{21} + (-0.0305)X_{22} + (0.0606)X_{23} + (0.0825)X_{24} + (0.0290)X_{25} + (0.0129)X_{26} + (0.0349)X_{27} + (-0.0018)X_{28} + (0.0080)X_{29} + (0.0096)X_{30} + (-0.0047)X_{31} + (-0.0965)X_{32} + (0.0466)X_{33} + (0.0679)X_{34}.
\]

By substituting a manager's score on each of the twenty-eight independent variables (in this case), his management general planning and decision making performance score may be estimated. The \( R^2 \) value is 0.46 which means that forty-six per cent of the variation in the dependent variable of this equation, that is management general planning and decision making performance, has been explained by the twenty-eight independent variables in this equation. However, the proportion of variance reported
as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned $R^2$ value and is estimated by the square of the average coefficient of determination*, generally known as "shrunken" $R'$. The value of the "shrunken" $R'\,^2$, in this case, is 0.24 which is an estimate of the value of $R^2$ if the effects of correlated error were eliminated.

E. H. 157: There will be a relationship between 28 manager's selected personal variables, selected situational variables and his management organizing and staffing performance score. This hypothesis stated in the null form is: There is no relationship between 28 manager's selected personal variables, selected situational variables and his management organizing and staffing performance score. The computed $F$ value is 2.2664 with 28 and 69 degrees of freedom. This is significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition. Data relevant to this hypothesis are presented in Tables 68 and 69.

*The average coefficient of determination or "shrunken" ($R'$) provide estimates of what the values of $R$ would be if the effects of correlated error were eliminated. $R'$ is an estimate of the value of $R$ in the parent population from which the sample was drawn. The values of $R'$, hereinafter, will be calculated according to the formula:

$$R' = \sqrt{1 - (1 - R^2) \left( \frac{N - 1}{N - 1 - n} \right)}$$

where $N$ is the sample size and $n$ is the number of predictor variables (24b, p. 153).
Table 68. Analysis of variance relevant to data of E. H. 157

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>28</td>
<td>50.9626</td>
<td>1.8201</td>
<td>2.2664</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>55.4134</td>
<td>0.8031</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>106.3760</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$R^2 = 0.48$

F is significant at both levels 0.05 and 0.01

Standard error = 0.8962

Table 69. Selected statistics from regression estimates of Equation 6* as partially tested by E. H. 157

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-1.7104</td>
<td>1.8556</td>
</tr>
<tr>
<td>7</td>
<td>-0.0108</td>
<td>0.0100</td>
</tr>
<tr>
<td>8</td>
<td>0.0036</td>
<td>0.0021</td>
</tr>
<tr>
<td>9</td>
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<td>0.0046</td>
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<tr>
<td>10</td>
<td>0.0125</td>
<td>0.0054</td>
</tr>
<tr>
<td>11</td>
<td>-0.0018</td>
<td>0.0034</td>
</tr>
<tr>
<td>12</td>
<td>-0.0013</td>
<td>0.0063</td>
</tr>
<tr>
<td>13</td>
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<td>0.0126</td>
</tr>
<tr>
<td>14</td>
<td>-0.0044</td>
<td>0.0120</td>
</tr>
<tr>
<td>15</td>
<td>-0.0337</td>
<td>0.0678</td>
</tr>
<tr>
<td>16</td>
<td>-0.0667</td>
<td>0.0659</td>
</tr>
<tr>
<td>17</td>
<td>-0.0410</td>
<td>0.0190</td>
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<tr>
<td>18</td>
<td>0.0270</td>
<td>0.0153</td>
</tr>
<tr>
<td>19</td>
<td>0.0770</td>
<td>0.0562</td>
</tr>
<tr>
<td>20</td>
<td>-0.0512</td>
<td>0.0537</td>
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<tr>
<td>21</td>
<td>-0.0499</td>
<td>0.2452</td>
</tr>
<tr>
<td>22</td>
<td>0.0720</td>
<td>0.0817</td>
</tr>
<tr>
<td>23</td>
<td>0.0335</td>
<td>0.0594</td>
</tr>
<tr>
<td>24</td>
<td>0.0527</td>
<td>0.0284</td>
</tr>
<tr>
<td>25</td>
<td>-0.0399</td>
<td>0.0625</td>
</tr>
<tr>
<td>26</td>
<td>0.0761</td>
<td>0.0866</td>
</tr>
</tbody>
</table>

*Equation 6 in the developed analytical model.
Table 69. (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>-0.0835</td>
<td>0.1025</td>
</tr>
<tr>
<td>28</td>
<td>-0.0039</td>
<td>0.0090</td>
</tr>
<tr>
<td>29</td>
<td>0.0255</td>
<td>0.0108</td>
</tr>
<tr>
<td>30</td>
<td>0.0052</td>
<td>0.0152</td>
</tr>
<tr>
<td>31</td>
<td>0.0286</td>
<td>0.0093</td>
</tr>
<tr>
<td>32</td>
<td>0.2613</td>
<td>0.1838</td>
</tr>
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<td>33</td>
<td>0.0325</td>
<td>0.0509</td>
</tr>
<tr>
<td>34</td>
<td>0.0255</td>
<td>0.0774</td>
</tr>
</tbody>
</table>

The variables shown in Table 69 are as follows:

\( X_2 \) = Management organizing and staffing performance
\( X_7 \) = Attitude toward profit accumulation
\( X_8 \) = Perception of job
\( X_9 \) = Attitude toward assuming risk
\( X_{10} \) = Attitude toward progressivism
\( X_{11} \) = Attitude toward individualism
\( X_{12} \) = Attitude toward traditional means of management
\( X_{13} \) = Attitude toward independence
\( X_{14} \) = Attitude toward management orientation
\( X_{15} \) = Years of formal education
\( X_{16} \) = Years of vocational agriculture
\( X_{17} \) = Years as manager of the farmer cooperative
\( X_{18} \) = Management experience
\( X_{19} \) = Management training
\( X_{20} \) = Farm work experience
$X_{21} = \text{Any specialized training}$

$X_{22} = \text{Chemical knowledge}$

$X_{23} = \text{Fertilizer knowledge}$

$X_{24} = \text{Finance knowledge}$

$X_{25} = \text{Knowledge about money value}$

$X_{26} = \text{Knowledge about profit building}$

$X_{27} = \text{Knowledge about margin determination}$

$X_{28} = \text{Job satisfaction}$

$X_{29} = \text{Sources of management information}$

$X_{30} = \text{Sources of product information}$

$X_{31} = \text{Number of similar businesses in the trade area}$

$X_{32} = \text{Competition rate}$

$X_{33} = \text{Restrictions of the competitive situation}$

$X_{34} = \text{Perception of success in competition.}$

An estimate of the management organizing and staffing performance may be secured by substituting appropriate values of $X_7$ through $X_{34}$ in the prediction equation.

$$Y = a + b_1 X_7 + b_2 X_8 + \ldots + b_{28} X_{34}.$$  

where "a" is constant and $b_1$ through $b_{28}$ are respective coefficients of regression of $X_7$ through $X_{34}$. The value of regression coefficients have been determined earlier (Table 69). After solving for the "a" value, sometimes called the "Y-intercept," as previously stated, the prediction equation is obtained.

$$Y = (-1.7104) + (-0.0108)X_7 + (0.0036)X_8 + (0.0070)X_9 +$$
(0.0125)X_{10} + (-0.0018)X_{11} + (-0.0013)X_{12} + (-0.0043)X_{13} +
(-0.0044)X_{14} + (-0.0337)X_{15} + (-0.0667)X_{16} + (-0.0410)X_{17} +
(0.0270)X_{18} + (0.0770)X_{19} + (-0.0512)X_{20} + (-0.0499)X_{21} +
(0.0720)X_{22} + (0.0335)X_{23} + (0.0527)X_{24} + (-0.0599)X_{25} +
(0.0761)X_{26} + (-0.0835)X_{27} + (-0.0039)X_{28} + (0.0255)X_{29} +
(0.0052)X_{30} + (0.0286)X_{31} + (0.2613)X_{32} + (0.0325)X_{33} +
(0.0255)X_{34}.

By substituting a manager's score on each of the twenty-eight independent variables in the above equation, his management organizing and staffing performance score may be estimated. The $R^2$ value is 0.48 which means that forty-eight per cent of the variation in the dependent variable of this equation, that is management organizing and staffing performance, has been explained by the twenty-eight independent variables in this regression equation. However, the proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned $R^2$ value and is estimated by the "shrunken" $R'_2$. The value of the "shrunken" $R'_2$, in this case, is 0.27 which is an estimate of the value of $R^2$ in the parent population from which the sample was drawn.

E. H. 158: There will be a relationship between 28 manager's selected personal variables, selected situational variables and his management directing and leading performance score. This hypothesis stated in the null form is: There is no relationship between 28 manager's selected personal variables, selected situational variables and his management directing and leading performance score. The computed F value is 1.0106
with 28 and 69 degrees of freedom. This is not significant at the 0.05 level of probability. The null hypothesis is not refuted. These data do not support the original proposition. Data relevant to this hypothesis are presented in Tables 70 and 71.

Table 70. Analysis of variance relevant to data of E. H. 158

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>28</td>
<td>193.7473</td>
<td>6.9195</td>
<td>1.0106</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>472.4568</td>
<td>6.8472</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>666.2041</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$R^2 = 0.29$

F is not significant at 0.05 level
Standard error = 2.6167

Table 71. Selected statistics from regression estimates of Equation 6 as partially tested by E. H. 158

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>-1.2303</td>
<td>5.4182</td>
</tr>
<tr>
<td>7</td>
<td>0.0148</td>
<td>0.0292</td>
</tr>
<tr>
<td>8</td>
<td>-0.0054</td>
<td>0.0062</td>
</tr>
<tr>
<td>9</td>
<td>-0.0075</td>
<td>0.0133</td>
</tr>
<tr>
<td>10</td>
<td>-0.0304</td>
<td>0.0157</td>
</tr>
<tr>
<td>11</td>
<td>-0.0079</td>
<td>0.0160</td>
</tr>
<tr>
<td>12</td>
<td>0.0334</td>
<td>0.0183</td>
</tr>
<tr>
<td>13</td>
<td>0.0268</td>
<td>0.0369</td>
</tr>
<tr>
<td>14</td>
<td>0.0118</td>
<td>0.0350</td>
</tr>
<tr>
<td>15</td>
<td>0.3593</td>
<td>0.1980</td>
</tr>
<tr>
<td>16</td>
<td>0.0275</td>
<td>0.1923</td>
</tr>
<tr>
<td>17</td>
<td>0.0342</td>
<td>0.0555</td>
</tr>
<tr>
<td>18</td>
<td>-0.0049</td>
<td>0.0448</td>
</tr>
<tr>
<td>19</td>
<td>-0.1167</td>
<td>0.1641</td>
</tr>
</tbody>
</table>
Table 71. (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.1567</td>
<td>0.1568</td>
</tr>
<tr>
<td>21</td>
<td>0.9900</td>
<td>0.7161</td>
</tr>
<tr>
<td>22</td>
<td>0.0209</td>
<td>0.2387</td>
</tr>
<tr>
<td>23</td>
<td>-0.1205</td>
<td>0.1733</td>
</tr>
<tr>
<td>24</td>
<td>-0.0911</td>
<td>0.0829</td>
</tr>
<tr>
<td>25</td>
<td>-0.0710</td>
<td>0.1826</td>
</tr>
<tr>
<td>26</td>
<td>0.1503</td>
<td>0.2529</td>
</tr>
<tr>
<td>27</td>
<td>-0.2457</td>
<td>0.2992</td>
</tr>
<tr>
<td>28</td>
<td>0.0315</td>
<td>0.0263</td>
</tr>
<tr>
<td>29</td>
<td>-0.0707</td>
<td>0.0315</td>
</tr>
<tr>
<td>30</td>
<td>0.0798</td>
<td>0.0443</td>
</tr>
<tr>
<td>31</td>
<td>-0.0069</td>
<td>0.0273</td>
</tr>
<tr>
<td>32</td>
<td>-0.0455</td>
<td>0.5368</td>
</tr>
<tr>
<td>33</td>
<td>-0.1901</td>
<td>0.1487</td>
</tr>
<tr>
<td>34</td>
<td>0.3519</td>
<td>0.2261</td>
</tr>
</tbody>
</table>

The variables shown in Table 71 are as follows:

\begin{align*}
X_3 &= \text{Management directing and leading performance} \\
X_7 &= \text{Attitude toward profit accumulation} \\
X_8 &= \text{Perception of job} \\
X_9 &= \text{Attitude toward assuming risk} \\
X_{10} &= \text{Attitude toward progressivism} \\
X_{11} &= \text{Attitude toward individualism} \\
X_{12} &= \text{Attitude toward traditional means of management} \\
X_{13} &= \text{Attitude toward independence} \\
X_{14} &= \text{Attitude toward management orientation} \\
X_{15} &= \text{Years of formal education} \\
X_{16} &= \text{Years of vocational agriculture} \\
X_{17} &= \text{Years as manager of the farmer cooperative}
\end{align*}
\( X_{18} = \) Management experience
\( X_{19} = \) Management training
\( X_{20} = \) Farm work experience
\( X_{21} = \) Any specialized training
\( X_{22} = \) Chemical knowledge
\( X_{23} = \) Fertilizer knowledge
\( X_{24} = \) Finance knowledge
\( X_{25} = \) Knowledge about money value
\( X_{26} = \) Knowledge about profit building
\( X_{27} = \) Knowledge about margin determination
\( X_{28} = \) Job satisfaction
\( X_{29} = \) Sources of management information
\( X_{30} = \) Sources of product information
\( X_{31} = \) Number of similar businesses in the trade area
\( X_{32} = \) Competition rate
\( X_{33} = \) Restrictions of the competitive situation
\( X_{34} = \) Perception of success in competition

Since the overall regression of the above regression equation is not significant at 0.05 level of probability no attempt has been made to develop prediction equation to this dependent variable, that is management directing and leading performance.

E. H. 159: There will be a relationship between 28 manager's selected personal variables, selected situational variables and his management coordination and communication performance score. This hypothesis stated in the null form is: There is no relationship between 28 manager's selected personal variables, selected situational variables and his
management coordination and communication performance score. The computed F value is 2.3711 with 28 and 69 degrees of freedom. This is significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition. Data relevant to this hypothesis are presented in Tables 72 and 73.

Table 72. Analysis of variance relevant to data of E. H. 159

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>28</td>
<td>43.7295</td>
<td>1.5618</td>
<td>2.3711</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>45.4473</td>
<td>0.6587</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>89.1768</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$R^2 = 0.49$

F is significant at 0.05 and 0.01 levels of probability

Standard error = 0.8116

Table 73. Selected statistics from regression estimates of Equation 6 as partially tested by E. H. 159

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>-1.1962</td>
<td>1.6805</td>
</tr>
<tr>
<td>7</td>
<td>0.0025</td>
<td>0.0091</td>
</tr>
<tr>
<td>8</td>
<td>0.0021</td>
<td>0.0019</td>
</tr>
<tr>
<td>9</td>
<td>0.0122</td>
<td>0.0041</td>
</tr>
<tr>
<td>10</td>
<td>-0.0018</td>
<td>0.0049</td>
</tr>
<tr>
<td>11</td>
<td>-0.0026</td>
<td>0.0031</td>
</tr>
<tr>
<td>12</td>
<td>0.0132</td>
<td>0.0057</td>
</tr>
<tr>
<td>13</td>
<td>0.0240</td>
<td>0.0114</td>
</tr>
<tr>
<td>14</td>
<td>0.0002</td>
<td>0.0109</td>
</tr>
<tr>
<td>15</td>
<td>-0.0100</td>
<td>0.0614</td>
</tr>
<tr>
<td>16</td>
<td>0.0024</td>
<td>0.0596</td>
</tr>
<tr>
<td>17</td>
<td>0.0036</td>
<td>0.0172</td>
</tr>
<tr>
<td>18</td>
<td>-0.0105</td>
<td>0.0139</td>
</tr>
</tbody>
</table>
Table 73. (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>-0.0385</td>
<td>0.0509</td>
</tr>
<tr>
<td>20</td>
<td>0.0054</td>
<td>0.0486</td>
</tr>
<tr>
<td>21</td>
<td>0.0247</td>
<td>0.2221</td>
</tr>
<tr>
<td>22</td>
<td>0.0945</td>
<td>0.0740</td>
</tr>
<tr>
<td>23</td>
<td>0.0019</td>
<td>0.0538</td>
</tr>
<tr>
<td>24</td>
<td>0.0504</td>
<td>0.0257</td>
</tr>
<tr>
<td>25</td>
<td>0.0030</td>
<td>0.0566</td>
</tr>
<tr>
<td>26</td>
<td>0.0505</td>
<td>0.0784</td>
</tr>
<tr>
<td>27</td>
<td>0.0662</td>
<td>0.0928</td>
</tr>
<tr>
<td>28</td>
<td>-0.0148</td>
<td>0.0082</td>
</tr>
<tr>
<td>29</td>
<td>-0.0091</td>
<td>0.0098</td>
</tr>
<tr>
<td>30</td>
<td>0.0287</td>
<td>0.0137</td>
</tr>
<tr>
<td>31</td>
<td>0.0055</td>
<td>0.0085</td>
</tr>
<tr>
<td>32</td>
<td>0.1733</td>
<td>0.1665</td>
</tr>
<tr>
<td>33</td>
<td>-0.0079</td>
<td>0.0461</td>
</tr>
<tr>
<td>34</td>
<td>0.1357</td>
<td>0.0701</td>
</tr>
</tbody>
</table>

The variables shown in Table 73 are as follows:

- \( X_4 \) = Management coordination and communication performance
- \( X_7 \) = Attitude toward profit accumulation
- \( X_8 \) = Perception of job
- \( X_9 \) = Attitude toward assuming risk
- \( X_{10} \) = Attitude toward progressivism
- \( X_{11} \) = Attitude toward individualism
- \( X_{12} \) = Attitude toward traditional means of management
- \( X_{13} \) = Attitude toward independence
- \( X_{14} \) = Attitude toward management orientation
- \( X_{15} \) = Years of formal education
- \( X_{16} \) = Years of vocational agriculture
\( X_{17} = \text{Years as manager of the farmer cooperative} \)

\( X_{18} = \text{Management experience} \)

\( X_{19} = \text{Management training} \)

\( X_{20} = \text{Farm work experience} \)

\( X_{21} = \text{Any specialized training} \)

\( X_{22} = \text{Chemical knowledge} \)

\( X_{23} = \text{Fertilizer knowledge} \)

\( X_{24} = \text{Finance knowledge} \)

\( X_{25} = \text{Knowledge about money value} \)

\( X_{26} = \text{Knowledge about profit building} \)

\( X_{27} = \text{Knowledge about margin determination} \)

\( X_{28} = \text{Job satisfaction} \)

\( X_{29} = \text{Sources of management information} \)

\( X_{30} = \text{Sources of product information} \)

\( X_{31} = \text{Number of similar businesses in the trade area} \)

\( X_{32} = \text{Competition rate} \)

\( X_{33} = \text{Restrictions of the competitive situation} \)

\( X_{34} = \text{Perception of success in competition} \)

An estimate of the management coordination and communication performance may be secured by substituting appropriate values of \( X_7 \) through \( X_{34} \) in the prediction equation.

\[ Y = a + b_1 X_7 + b_2 X_8 + \ldots + b_{28} X_{34}. \]

where "a" is constant and \( b_1 \) through \( b_{28} \) are respective coefficients of regression of \( X_7 \) through \( X_{34} \). The value of regression coefficients have been determined earlier (Table 73). After solving for the "a" value, the
A prediction equation is obtained.

\[
Y = (-1.1982) + (0.0025)X_7 + (0.0021)X_8 + (0.0122)X_9 + \\
(-0.0018)X_{10} + (-0.0026)X_{11} + (0.0132)X_{12} + (0.0240)X_{13} + \\
(0.0002)X_{14} + (0.0100)X_{15} + (0.0024)X_{16} + (0.0036)X_{17} + \\
(-0.0105)X_{18} + (-0.0385)X_{19} + (0.0054)X_{20} + (0.0247)X_{21} + \\
(0.0945)X_{22} + (0.0019)X_{23} + (0.0504)X_{24} + (0.0030)X_{25} + \\
(0.0505)X_{26} + (0.0662)X_{27} + (-0.0148)X_{28} + (-0.0091)X_{29} + \\
(0.0287)X_{30} + (0.0055)X_{31} + (0.1733)X_{32} + (-0.0079)X_{33} + \\
(0.1357)X_{34}.
\]

By substituting a manager's score on each of the twenty-eight independent variables in the above equation, his management coordination and communication performance score may be estimated. The $R^2$ value is 0.49 which means that forty-nine per cent of the variation in the dependent variable of this equation, that is management coordination and communication performance, has been explained by the twenty-eight independent variables in this equation. However, the proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned $R^2$ value and is estimated by the "shrunken" $R'^2$. The value of the "shrunken" $R'^2$, in this case, is 0.18 which is an estimate of the value of $R^2$ if the effects of correlated error were eliminated. In other words, $R'^2$ is an estimate of the value of $R^2$ in the parent population from which the sample was drawn.

E. H. 160: There will be a relationship between 28 manager's selected
personal variables, selected situational variables and his management controlling performance score. This hypothesis stated in the null form is: There is no relationship between 28 manager's selected personal variables, selected situational variables and his management controlling performance score. The computed $F$ value is 2.5491 with 28 and 69 degrees of freedom. This is significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition. Data relevant to this hypothesis are presented in Tables 74 and 75.

Table 74. Analysis of variance relevant to data of E. H. 160

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>$F$ - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>28</td>
<td>1891.0509</td>
<td>67.5375</td>
<td>2.5491</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>1828.1571</td>
<td>26.4950</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>3719.2080</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$R^2 = 0.51$

$F$ is significant at both levels 0.05 and 0.01

Standard error = 5.1473

Table 75. Selected statistics from regression estimates of Equation 6 as partially tested by E. H. 160

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>-14.1010</td>
<td>10.6582</td>
</tr>
<tr>
<td>7</td>
<td>0.0631</td>
<td>0.0575</td>
</tr>
<tr>
<td>8</td>
<td>0.0135</td>
<td>0.0121</td>
</tr>
<tr>
<td>9</td>
<td>0.0444</td>
<td>0.0262</td>
</tr>
<tr>
<td>10</td>
<td>-0.0372</td>
<td>0.0308</td>
</tr>
<tr>
<td>11</td>
<td>-0.0354</td>
<td>0.0197</td>
</tr>
</tbody>
</table>
Table 75. (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>0.0051</td>
<td>0.0359</td>
</tr>
<tr>
<td>13</td>
<td>0.0517</td>
<td>0.0725</td>
</tr>
<tr>
<td>14</td>
<td>-0.0157</td>
<td>0.0689</td>
</tr>
<tr>
<td>15</td>
<td>0.4799</td>
<td>0.3896</td>
</tr>
<tr>
<td>16</td>
<td>-0.0708</td>
<td>0.3783</td>
</tr>
<tr>
<td>17</td>
<td>-0.2265</td>
<td>0.1092</td>
</tr>
<tr>
<td>18</td>
<td>0.0635</td>
<td>0.0881</td>
</tr>
<tr>
<td>19</td>
<td>-0.1052</td>
<td>0.3229</td>
</tr>
<tr>
<td>20</td>
<td>-0.9413</td>
<td>0.3085</td>
</tr>
<tr>
<td>21</td>
<td>2.4665</td>
<td>1.4086</td>
</tr>
<tr>
<td>22</td>
<td>1.8132</td>
<td>0.4695</td>
</tr>
<tr>
<td>23</td>
<td>0.0367</td>
<td>0.3409</td>
</tr>
<tr>
<td>24</td>
<td>0.1841</td>
<td>0.1631</td>
</tr>
<tr>
<td>25</td>
<td>-0.3169</td>
<td>0.3591</td>
</tr>
<tr>
<td>26</td>
<td>1.1150</td>
<td>0.4975</td>
</tr>
<tr>
<td>27</td>
<td>-0.4527</td>
<td>0.5885</td>
</tr>
<tr>
<td>28</td>
<td>-0.0022</td>
<td>0.0517</td>
</tr>
<tr>
<td>29</td>
<td>-0.0494</td>
<td>0.0621</td>
</tr>
<tr>
<td>30</td>
<td>-0.0208</td>
<td>0.08705</td>
</tr>
<tr>
<td>31</td>
<td>-0.0151</td>
<td>0.0537</td>
</tr>
<tr>
<td>32</td>
<td>-0.7062</td>
<td>1.0560</td>
</tr>
<tr>
<td>33</td>
<td>-0.1639</td>
<td>0.2925</td>
</tr>
<tr>
<td>34</td>
<td>0.5273</td>
<td>0.4448</td>
</tr>
</tbody>
</table>

The variables shown in Table 75 are as follows:

- $X_5$ = Management controlling performance score
- $X_7$ = Attitude toward profit accumulation
- $X_8$ = Perception of job
- $X_9$ = Attitude toward assuming risk
- $X_{10}$ = Attitude toward progressivism
- $X_{11}$ = Attitude toward individualism
- $X_{12}$ = Attitude toward traditional means of management
- $X_{13}$ = Attitude toward independence
An estimate of the management controlling performance may be secured by substituting appropriate values of \( X_7 \) through \( X_{34} \) in the prediction equation.

\[
Y = a + b_1 X_7 + b_2 X_8 + \ldots + b_{28} X_{34}
\]
where "a" is constant and $b_1$ through $b_{28}$ are respective coefficients of regression of $X_7$ through $X_{34}$. The value of regression coefficients have been determined earlier (Table 75). After solving for the "a" value, the prediction equation is obtained.

$$Y = (-14.1010) + (0.0631)X_7 + (0.0135)X_8 + (0.0444)X_9 + (-0.0372)X_{10} + (-0.0354)X_{11} + (0.0051)X_{12} + (0.0517)X_{13} + (-0.0157)X_{14} + (0.4799)X_{15} + (-0.0708)X_{16} + (-0.2265)X_{17} + (0.0635)X_{18} - (-0.1052)X_{19} + (-0.9413)X_{20} + (2.4665)X_{21} + (1.8132)X_{22} + (0.0367)X_{23} + (0.1841)X_{24} + (-0.3169)X_{25} + (1.1150)X_{26} + (-0.4527)X_{27} + (-0.0022)X_{28} + (-0.0494)X_{29} + (-0.0208)X_{30} + (-0.0151)X_{31} + (-0.7062)X_{32} + (-0.1639)X_{33} + (0.5273)X_{34}.$$

By substituting a manager's score on each of the twenty-eight independent variables in the above equation, his management controlling performance score may be estimated. The $R^2$ value is 0.51, which means that fifty-one per cent of the variation in the dependent variable of the above equation, that is controlling performance, has been explained by the twenty-eight independent variables in the equation. However, the proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned $R^2$ value and is estimated by the "shrunken" $R'^2$. The value of the "shrunken" $R'^2$, in this case, is 0.31 which is an estimate of the value of $R^2$ if the effects of correlated error were eliminated.
General hypothesis 9: There will be a relationship between a manager's selected personal variables, selected situational variables, his management behavior practices (performance) and the efficiency of the association which he manages.

E. H. 161: There will be a relationship between manager's selected personal variables, selected situational variables, management behavior practices and the fertilizer sales score of the association which he manages. This hypothesis stated in the null form is: There is no relationship between manager's selected personal variables, selected situational variables, management behavior practices and the fertilizer sales score of the association which he manages. The computed F value is 1.7557 with 33 and 64 degrees of freedom. This is significant at the 0.05 level of probability. The null hypothesis is refuted. These data do support the original proposition. Data relevant to this hypothesis are presented in Tables 76 and 77.

Table 76. Analysis of variance relevant to data of E. H. 161

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>33</td>
<td>20.6589</td>
<td>0.6260</td>
<td>1.7557</td>
</tr>
<tr>
<td>Residual</td>
<td>69</td>
<td>22.8207</td>
<td>0.3566</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>43.4796</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ R^2 = 0.48 \]

F is significant at the 0.05 level of probability. Standard error = 0.5971

*The 33 manager's variables are those personal variables, situational variables, and management performance variables which were previously discussed and presented in the preceding section of this thesis. A list of the 33 variables will be presented along with the statement of findings relevant to E. H. 161.
Table 77. Selected statistics from regression analysis relevant to data of E. H. 161

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>1.0714</td>
<td>1.2973</td>
</tr>
<tr>
<td>1</td>
<td>0.0694</td>
<td>0.0902</td>
</tr>
<tr>
<td>2</td>
<td>0.0595</td>
<td>0.8769</td>
</tr>
<tr>
<td>3</td>
<td>-0.0010</td>
<td>0.0284</td>
</tr>
<tr>
<td>4</td>
<td>0.0231</td>
<td>0.0913</td>
</tr>
<tr>
<td>5</td>
<td>-0.0113</td>
<td>0.0150</td>
</tr>
<tr>
<td>7</td>
<td>0.0113</td>
<td>0.0069</td>
</tr>
<tr>
<td>8</td>
<td>-0.0008</td>
<td>0.0015</td>
</tr>
<tr>
<td>9</td>
<td>0.0040</td>
<td>0.0033</td>
</tr>
<tr>
<td>10</td>
<td>-0.0028</td>
<td>0.0039</td>
</tr>
<tr>
<td>11</td>
<td>-0.0041</td>
<td>0.0024</td>
</tr>
<tr>
<td>12</td>
<td>0.0118</td>
<td>0.0044</td>
</tr>
<tr>
<td>13</td>
<td>0.0063</td>
<td>0.0088</td>
</tr>
<tr>
<td>14</td>
<td>-0.0096</td>
<td>0.0080</td>
</tr>
<tr>
<td>15</td>
<td>0.0739</td>
<td>0.0471</td>
</tr>
<tr>
<td>16</td>
<td>-0.0411</td>
<td>0.0443</td>
</tr>
<tr>
<td>17</td>
<td>0.0004</td>
<td>0.0137</td>
</tr>
<tr>
<td>18</td>
<td>0.0078</td>
<td>0.0106</td>
</tr>
<tr>
<td>19</td>
<td>-0.0367</td>
<td>0.0391</td>
</tr>
<tr>
<td>20</td>
<td>-0.0766</td>
<td>0.0389</td>
</tr>
<tr>
<td>21</td>
<td>-0.2468</td>
<td>0.1720</td>
</tr>
<tr>
<td>22</td>
<td>0.0638</td>
<td>0.0607</td>
</tr>
<tr>
<td>23</td>
<td>0.0164</td>
<td>0.0402</td>
</tr>
<tr>
<td>24</td>
<td>0.0305</td>
<td>0.0213</td>
</tr>
<tr>
<td>25</td>
<td>-0.0236</td>
<td>0.0423</td>
</tr>
<tr>
<td>26</td>
<td>-0.0628</td>
<td>0.0598</td>
</tr>
<tr>
<td>27</td>
<td>-0.1140</td>
<td>0.0696</td>
</tr>
<tr>
<td>28</td>
<td>-0.0020</td>
<td>0.0062</td>
</tr>
<tr>
<td>29</td>
<td>0.0077</td>
<td>0.0080</td>
</tr>
<tr>
<td>30</td>
<td>-0.0063</td>
<td>0.0107</td>
</tr>
<tr>
<td>31</td>
<td>-0.0014</td>
<td>0.0068</td>
</tr>
<tr>
<td>32</td>
<td>0.1025</td>
<td>0.1265</td>
</tr>
<tr>
<td>33</td>
<td>-0.0271</td>
<td>0.0349</td>
</tr>
<tr>
<td>34</td>
<td>0.1031</td>
<td>0.0542</td>
</tr>
</tbody>
</table>

The variables shown in Table 77 are as follows:

\[ X_{35} = \text{Fertilizer sales category} \]

\[ X_1 = \text{Management general planning and decision making performance} \]
\( X_2 \) = Management organizing and staffing performance
\( X_3 \) = Management directing and leading performance
\( X_4 \) = Management coordination and communication performance
\( X_5 \) = Management controlling performance
\( X_7 \) = Attitude toward profit accumulation
\( X_8 \) = Perception of job
\( X_9 \) = Attitude toward assuming risk
\( X_{10} \) = Attitude toward progressivism
\( X_{11} \) = Attitude toward individualism
\( X_{12} \) = Attitude toward traditional means of management
\( X_{13} \) = Attitude toward independence
\( X_{14} \) = Attitude toward management orientation
\( X_{15} \) = Years of formal education
\( X_{16} \) = Years of vocational agriculture
\( X_{17} \) = Years as manager of the farmer cooperative
\( X_{18} \) = Management experience
\( X_{19} \) = Management training
\( X_{20} \) = Farm work experience
\( X_{21} \) = Any specialized training
\( X_{22} \) = Chemical knowledge
\( X_{23} \) = Fertilizer knowledge
\( X_{24} \) = Finance knowledge
\( X_{25} \) = Knowledge about money value
\( X_{26} \) = Knowledge about profit building
\( X_{27} \) = Knowledge about margin determination
\( X_{28} = \) Job satisfaction  
\( X_{29} = \) Sources of management information  
\( X_{30} = \) Sources of product information  
\( X_{31} = \) Number of similar businesses in the trade area  
\( X_{32} = \) Competition rate  
\( X_{33} = \) Restrictions of the competitive situation  
\( X_{34} = \) Perception of success in competition.

An estimate of the efficiency of the association as measured by the association's fertilizer sales category may be secured by substituting appropriate values of \( X_1 \) through \( X_5 \) and \( X_7 \) through \( X_{34} \) in the prediction equation.

\[
Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + \ldots b_{33} X_{34},
\]

where "a" is constant and \( b_1 \) through \( b_{33} \) are respective coefficients of regression \( X_1 \) through \( X_5 \) and \( X_7 \) through \( X_{34} \). The value of regression coefficients have been determined earlier (Table 77). After solving for the "a" value, the prediction equation is obtained.

\[
Y = (1.0714) + (0.0694)X_1 + (0.0595)X_2 + (-0.0010)X_3 + (0.0231)X_4 + (-0.0113)X_5 + (0.0113)X_7 + (-0.0008)X_8 + (0.0040)X_9 + (-0.0028)X_{10} + (-0.0041)X_{11} + (0.0118)X_{12} + (0.0063)X_{13} + (-0.0096)X_{14} + (0.0739)X_{15} + (-0.0411)X_{16} + (0.0004)X_{17} + (0.0078)X_{18} + (-0.0347)X_{19} + (-0.0766)X_{20} + (-0.2468)X_{21} + (0.0638)X_{22} + (0.0164)X_{23} + (0.0305)X_{24} + (-0.0236)X_{25} + (-0.0628)X_{26} + (-0.1140)X_{27} + (-0.0020)X_{28} + (0.0077)X_{29} + (-0.0063)X_{30} + (-0.0014)X_{31} + (0.1025)X_{32} + \ldots \]
\(-0.0271X_{33} + (0.1031)X_{34}\).

By substituting a manager's score on each of the thirty-three independent variables in the above equation, his association's fertilizer sales category score may be estimated. The $R^2$ value is 0.48 which means that forty-eight per cent of the variation in the dependent variable of the above equation, that is the association's fertilizer sales category score, has been explained by the thirty-three independent variables in the equation. However, the proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned $R^2$ value and is estimated by the "shrunken" $R'^2$. The value of the "shrunken" $R'^2$, in this case, is 0.21 which is an estimate of the value of $R^2$ if the effects of correlated error were eliminated.

E. H. 162: There will be a relationship between a 33 manager's selected personal variables, selected situational variables, management behavior practices and cost per dollar sales in dollars of the association which he manages. This hypothesis stated in the null form is:

There is no relationship between a 33 manager's selected personal variables, selected situational variables, management behavior practices and cost per dollar sales in dollars of the association which he manages. The computed $F$ value is 2.7528 with 33 and 64 degrees of freedom. This is significant at both 0.05 and 0.01 levels of probability. The null hypothesis is refuted. These data do support the original proposition. Data relevant to this hypothesis are presented in Tables 78 and 79.
Table 78. Analysis of variance relevant to data of E. H. 162

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>33</td>
<td>114326.05</td>
<td>3464.43</td>
<td>2.7528</td>
</tr>
<tr>
<td>Residual</td>
<td>64</td>
<td>80543.95</td>
<td>1258.50</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>194870.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(R^2 = 0.59\)

F is significant at both 0.05 and 0.01 levels of probability.
Standard error = 35.48

Table 79. Selected statistics from regression analysis relevant to data of E. H. 162

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>47.1485</td>
<td>77.0732</td>
</tr>
<tr>
<td>1</td>
<td>-1.2031</td>
<td>5.3586</td>
</tr>
<tr>
<td>2</td>
<td>15.1639</td>
<td>5.2095</td>
</tr>
<tr>
<td>3</td>
<td>-0.6041</td>
<td>1.6902</td>
</tr>
<tr>
<td>4</td>
<td>-4.2893</td>
<td>5.4267</td>
</tr>
<tr>
<td>5</td>
<td>-0.2057</td>
<td>0.8921</td>
</tr>
<tr>
<td>7</td>
<td>0.1251</td>
<td>0.4070</td>
</tr>
<tr>
<td>8</td>
<td>0.0477</td>
<td>0.0875</td>
</tr>
<tr>
<td>9</td>
<td>-0.2458</td>
<td>0.1977</td>
</tr>
<tr>
<td>10</td>
<td>-0.3547</td>
<td>0.2354</td>
</tr>
<tr>
<td>11</td>
<td>0.1051</td>
<td>0.1412</td>
</tr>
<tr>
<td>12</td>
<td>0.0199</td>
<td>0.2642</td>
</tr>
<tr>
<td>13</td>
<td>0.0649</td>
<td>0.5209</td>
</tr>
<tr>
<td>14</td>
<td>-0.6302</td>
<td>0.4765</td>
</tr>
<tr>
<td>15</td>
<td>4.4956</td>
<td>2.7995</td>
</tr>
<tr>
<td>16</td>
<td>-2.4549</td>
<td>2.6304</td>
</tr>
<tr>
<td>17</td>
<td>-0.2748</td>
<td>0.8147</td>
</tr>
<tr>
<td>18</td>
<td>-0.2686</td>
<td>0.6276</td>
</tr>
<tr>
<td>19</td>
<td>3.9240</td>
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</tr>
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<td>20</td>
<td>1.3466</td>
<td>2.3104</td>
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<tr>
<td>21</td>
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<td>10.2182</td>
</tr>
<tr>
<td>22</td>
<td>6.0925</td>
<td>3.6105</td>
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Table 79. (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Standard error</th>
</tr>
</thead>
<tbody>
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<td>23</td>
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<td>24</td>
<td>-0.7196</td>
<td>1.2679</td>
</tr>
<tr>
<td>25</td>
<td>-6.2549</td>
<td>2.5105</td>
</tr>
<tr>
<td>26</td>
<td>1.1929</td>
<td>3.5550</td>
</tr>
<tr>
<td>27</td>
<td>-5.1949</td>
<td>4.1358</td>
</tr>
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<td>28</td>
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<td>0.3698</td>
</tr>
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<td>29</td>
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<td>0.4755</td>
</tr>
<tr>
<td>30</td>
<td>0.8940</td>
<td>0.6345</td>
</tr>
<tr>
<td>31</td>
<td>1.4296</td>
<td>0.4017</td>
</tr>
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<td>32</td>
<td>2.7687</td>
<td>7.5160</td>
</tr>
<tr>
<td>33</td>
<td>-1.7348</td>
<td>2.0721</td>
</tr>
<tr>
<td>34</td>
<td>1.9049</td>
<td>3.2208</td>
</tr>
</tbody>
</table>

The variables shown in Table 79 are as follows:

- \( X_{36} \) = Cost per dollar sales
- \( X_1 \) = Management general planning and decision making performance
- \( X_2 \) = Management organizing and staffing performance
- \( X_3 \) = Management directing and leading performance
- \( X_4 \) = Management coordination and communication performance
- \( X_5 \) = Management controlling performance
- \( X_7 \) = Attitude toward profit accumulation
- \( X_8 \) = Perception of job
- \( X_9 \) = Attitude toward assuming risk
- \( X_{10} \) = Attitude toward progressivism
- \( X_{11} \) = Attitude toward individualism
- \( X_{12} \) = Attitude toward traditional means of management
- \( X_{13} \) = Attitude toward independence
\( X_{14} = \text{Attitude toward management orientation.} \)

\( X_{15} = \text{Years of formal education} \)

\( X_{16} = \text{Years of vocational agriculture} \)

\( X_{17} = \text{Years as manager of the farmer cooperative} \)

\( X_{18} = \text{Management experience} \)

\( X_{19} = \text{Management training} \)

\( X_{20} = \text{Farm work experience} \)

\( X_{21} = \text{Any specialized training} \)

\( X_{22} = \text{Chemical knowledge} \)

\( X_{23} = \text{Fertilizer knowledge} \)

\( X_{24} = \text{Finance knowledge} \)

\( X_{25} = \text{Knowledge about money value.} \)

\( X_{26} = \text{Knowledge about profit building} \)

\( X_{27} = \text{Knowledge about margin determination} \)

\( X_{28} = \text{Job satisfaction} \)

\( X_{29} = \text{Sources of management information} \)

\( X_{30} = \text{Sources of product information} \)

\( X_{31} = \text{Number of similar businesses in the trade area} \)

\( X_{32} = \text{Competition rate} \)

\( X_{33} = \text{Restrictions of the competitive situation} \)

\( X_{34} = \text{Perception of success in competition} \)

An estimate of the efficiency of the association as measures by the association's cost per dollar sales in dollars may be secured by substituting appropriate values of \( X_1 \) through \( X_5 \) and \( X_7 \) through \( X_{34} \) in the prediction equation.
\[ Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + \ldots + b_{33} X_{34}, \]

where "a" is constant and \( b_1 \) through \( b_{33} \) are respective coefficients of regression of \( X_1 \) through \( X_5 \) and \( X_7 \) through \( X_{34} \). The value of regression coefficients have been determined earlier (Table 79). After solving for the "a" value, the prediction equation is obtained.

\[ Y = (47.1485) + (-1.2031)X_1 + (15.1639)X_2 + (-0.6041)X_3 + \\
(-4.2893)X_4 + (-0.2057)X_5 + (0.1251)X_7 + (0.0477)X_8 + \\
(-0.2458)X_9 + (-0.3547)X_{10} + (0.1051)X_{11} + (0.0199)X_{12} + \\
(0.0649)X_{13} + (-0.6302)X_{14} + (4.4956)X_{15} + (-2.4549)X_{16} + \\
(-0.2748)X_{17} + (-0.2686)X_{18} + (3.9240)X_{19} + (1.3466)X_{20} + \\
(20.3646)X_{21} + (6.9925)X_{22} + (1.0464)X_{23} + (-0.7196)X_{24} + \\
(-6.2549)X_{25} + (1.1929)X_{26} + (-5.1949)X_{27} + (-0.1030)X_{28} + \\
(-1.7446)X_{29} + (0.8940)X_{30} + (1.4296)X_{31} + (2.7687)X_{32} + \\
(-1.7348)X_{33} + (1.9049)X_{34}. \]

By substituting a manager's score on each of the thirty-three independent variables in the above equation, his association's cost per dollar sales in dollars may be estimated. The \( R^2 \) value is 0.59 which means that fifty-nine per cent of the variation in the dependent variable of the above equation, that is the association's cost per dollar sales in dollars, has been explained by the thirty-three independent variables in the equation. However, the proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned \( R^2 \) value and is estimated by the "shrunken" \( R'^2 \). The value of the "shrunken" \( R'^2 \),
in this case, is 0.38 which is an estimate of the value of $R^2$ if the effects of correlated error were eliminated.

**General hypothesis 10:** There will be a relationship between a manager's selected personal variables, selected situational variables, his management behavior practices (performance), the efficiency of the association which he manages and the economic success and/or performance of that association.

It has been stated before that one of the major objectives of this study is to determine the extent to which human behavior, management behavior in this case, and its consequences might be predicted from selected individual's, manager's in this study, personal variables, situational variables, and any other variables which might affect human behavior and its consequences. These factors and/or variables have been considered to be parts of an interactive system, each having an identifiable effect, but having their influence in combination with the other factors and/or variables. Thus it is probable the individual's management behavior is not influenced solely by any one of these factors but more probably by a combination of all of them in interaction. In view of this interaction the purpose of the present section is to determine the degree of association between the combination of the variables as stated in General hypothesis 10 and previously expressed in Equation 12 in the developed analytical model. Equation 12 in the developed analytical model was stated in the Theoretical Orientation chapter as follows:

$$Q = F \left[ f_1(X_1, \ldots, X_j, \ldots, X_n); f_2(X_1, \ldots, X_j, \ldots, X_n); \ldots f_m(X_1, \ldots, X_j, \ldots, X_n) \right].$$
where, \( j = 1, \ldots, n \)
\[ i = 1, \ldots, m \]

A regression equation is computed to operationalized Equation 12 of the developed analytical model whereby an estimate of the consequences of the output of management behavior is made by selected appropriate values of \( X_1, X_2, \ldots, X_{37} \) in the general formula.

\[ Y = \alpha + b_1 X_1 + b_2 X_2 + b_3 X_3 + \ldots + b_{37} X_{37} + \epsilon. \]

The assumptions made here are,

(1) that the \( X \)'s are fixed variates and may be looked upon as population parameters,

(2) that a fixed set of \( X \)'s, the \( Y \)'s associated with this set, are normally independently distributed, and

(3) that for any set of \( X \)'s, the variance of \( Y \) shall be the same.

The symbols used to denote each of the variables in the above mentioned analysis are as follows:

Dependent: \( Y \) = Average net operating revenue of the association.

Independent: \( X_1 \) = General planning and decision making performance.
\( X_2 \) = Organizing and staffing performance
\( X_3 \) = Directing and leading performance
\( X_4 \) = Coordination and communication performance
\( X_5 \) = Controlling performance
\( X_6 \) = Attitude toward profit accumulation
\( X_7 \) = Perception of job
$X_8$ = Attitude toward assuming risk
$X_9$ = Attitude toward progressivism
$X_{10}$ = Attitude toward individualism
$X_{11}$ = Attitude toward traditional means of management
$X_{12}$ = Attitude toward independence
$X_{13}$ = Attitude toward management orientation
$X_{14}$ = Years of formal education
$X_{15}$ = Years of vocational agriculture
$X_{16}$ = Years as manager of the farmer cooperative
$X_{17}$ = Management experience
$X_{18}$ = Management training
$X_{19}$ = Farm work experience
$X_{20}$ = Any specialized training
$X_{21}$ = Chemical knowledge
$X_{22}$ = Fertilizer knowledge
$X_{23}$ = Finance knowledge
$X_{24}$ = Knowledge about money value
$X_{25}$ = Knowledge about profit building
$X_{26}$ = Knowledge about margin determination
$X_{27}$ = Job satisfaction
$X_{28}$ = Sources of management information
$X_{29}$ = Sources of product information
$X_{30}$ = Number of similar businesses in the trade area
$X_{31}$ = Competition rate
$X_{32}$ = Restrictions of the competitive situation
All of the variables used to operationalize the theoretical concepts are included in the above list. The computed regression or prediction equation is as follows:

\[ Y = 738 + (535)X_1 + (301)X_2 + (13.1)X_3 + (278)X_4 + (16.9)X_5 + \\
(-2.06)X_6 + (-5.05)X_7 + (8.88)X_8 + (8.62)X_9 + (4.40)X_{10} + \\
(-8.60)X_{11} + (-32.9)X_{12} + (0.225)X_{13} + (83.8)X_{14} + (-113)X_{15} \\
+ (66.2)X_{16} + (16.3)X_{17} + (-68.5)X_{18} + (145)X_{19} + (-386)X_{20} \\
+ (-162)X_{21} + (-89.4)X_{22} + (-40.1)X_{23} + (-16.4)X_{24} + \\
(-26.7)X_{25} + (-118)X_{26} + (11.8)X_{27} + (4.28)X_{28} + (-13.6)X_{29} \\
+ (31.0)X_{30} + (-178)X_{31} + (-43.7)X_{32} + (-179)X_{33} + (441)X_{34} \\
+ (1.29)X_{35}. \]

By substituting the values of each of the X's for any given manager into the above equation, the obtained value is a prediction of his farmer cooperative association's relative economic success and/or economic performance. The overall regression for this equation was tested using F test. The computed F value is 2.45 with 35 and 62 degrees of freedom, which is statistically significant at both 0.05 and 0.01 levels of probability. Thus these data do support the general hypotheses. Data relevant to the analysis of variance of the above regression equation is presented in Table 80.
Table 80. Analysis of variance of the overall regression equation

<table>
<thead>
<tr>
<th>Sources of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>35</td>
<td>138232122</td>
<td>3949489</td>
<td>2.45</td>
</tr>
<tr>
<td>Residual</td>
<td>62</td>
<td>99914998</td>
<td>1611532</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>238147120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( R^2 = 0.58 \)

F is statistically significant at both 0.05 and 0.01 levels of probability.

Standard error = 1269.5

The independent variables in the above regression equation explains 58 per cent of the variation in the dependent variable, that is average net operating revenue, which has been used, as previously stated, as indicator of the relative economic success and/or performance of the farmer cooperative association. However, the proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this study. The proportion of the variance explained in future samples from the same population would be less than the mentioned above \( R^2 \) value and is estimated by the "shrunk" \( R'^2 \). The value of the "shrunk" \( R'^2 \), in this case, is 0.34 which is an estimate of the value of \( R^2 \) if the effects of correlated error were eliminated.
DISCUSSION AND SUGGESTION FOR FUTURE RESEARCH

Introduction

In this thesis an overall model of human behavior practices and its consequences was developed and discussed extensively. The relationships between the components of the developed model were examined and discussed in the Theoretical Orientations chapter. Specifically, the relationships between selected individual personal variables (attitudes, knowledge and job satisfaction) and selected situational variables (sources of information and competition) were postulated to be related to management behavior. Also the relationships between management behavior practices, the output of management behavior practices and the consequences of the output of management behavior practices were examined and discussed.

This chapter will present discussion of the findings of this study. First, a specific discussion of each cluster of findings will be presented followed by discussion of the multiple relationships in this study and second, a general discussion of all the findings and a general assessment of the study will follow. This will be followed by suggestions for future research.

Attitudes

It was assumed theoretically that attitudes are related to human behavior, specifically management behavior. Five types of management behavior have been delineated theoretically. Eight attitudinal variables were used on the empirical level to measure the general level concept. Forty empirical hypotheses were used to test the general hypothesis. Data, in this study, shows support for ten empirical hypotheses only,
Findings pertaining to each attitudinal dimension in this study will be discussed in the following.

**Individual orientation toward profit**

In the theoretical discussion of this attitude dimension it was stated that many writers have noted the prominent emphasis Americans place on material aspects of their world. It was noted also that the individual is held responsible for his own success or failures. The basis for any causal analysis of the events in the life of a person must ultimately focus on his actions. Concurrent with individual emphasis, in the American society, is the heavy stress on the economic aspects of success. Therefore, it was derived that there will be a positive relationship between a manager's attitude toward making profits and his types of management behavior.

Findings pertaining to this attitude show no significant relationships between this attitude and types of management behavior. However, data relevant to this attitude show weak relationships between this attitude and management directing and leading performance, management coordination and communication performance, and management controlling performance. Thus one might infer that relationships between this attitude and the above mentioned types of management behavior exist, however, they are not strong enough to become statistically significant at the 0.05 level of probability when the coefficient of correlation is used as a measure of the degree of association between variables. Two reasons could be stated as a possible explanation for the lack of support by empirical measures for the hypothesized relationships between this attitude and types of
management behavior. There are: (1) the limitations of the study in general, (2) the limitations of the empirical measures.

**Attitude toward individualism**

It was argued theoretically that one of the most dominant value themes in American society as explicitly delineated by numerous writers (96) is the idea of the supremacy of the individual. "...to be a person is to be independent, responsible, and self-respecting, thereby to be worthy of concern and respect in one's own right" (96, p. 463). This attitude was highly based on this value theme. This attitude was defined as the degree to which a manager's attitude toward his cognitive world is one of active, aggressive, "rugged individualism." Furthermore, it was previously postulated that there will be a positive relationship between a manager's attitude toward individualism and his types of management behavior.

Findings pertaining to this attitude as measured show that there are no statistically significant relationships between a manager's attitude toward individualism and his types of management behavior. A counter hypothesis may be suggested namely that the manager, in order to be successful, must work with the group and consult them in most, if not all, the stages of management and its processes.

**Attitude toward independence**

This attitude dimension was defined as the degree to which an individual wishes to remain independent of those around him. Relationships between this attitude and types of management behavior were postulated.

Data relevant to this attitude show a positive relationship between
a manager's attitude toward independence and his management coordination and communication performance. Thus one might derive that managers who are oriented toward working with the group, meantime remain independent when it comes to making decisions, will have high coordination and communication performance which in turn is assumed to increase the efficiency of the business association and will render higher profits to the business association.

Manager's attitude toward independence shows very weak positive relationships with his management general planning and decision making performance and management organizing and staffing performance. This attitude shows also a very weak negative relationship with management directing and leading performance and management controlling performance. Thus in conclusion one might say that data and findings of this study do have a very slight tendency to support the previously stated theoretical discussion.

Attitude toward management orientation

It was argued theoretically that it is important whether the manager's attitude toward his own position is one of dependence upon external forces, in this case the market, the economy, the government and the farmer's situation, or whether it is one of mastery via efficient decision making based upon known facts and risk probability distributions. It is the case of whether the manager is oriented more toward the traditional rural attitudes or those of the business sector of society, a continuum characterized by the degree of presence or absence of mastery. This attitude, management orientation, was defined as the degree to which an individual
feels he can influence the financial outcomes of the business through his managerial position. The relationships between this attitude and types of management behavior were postulated. A manager's attitude toward his management position was not found to be related to any of his management behavior types. Lack of support is probably due to the limitations of the study in general and to the limitations of the empirical measures which were used in particular.

**Job definition**

A manager's perception of his job as a positive, flexible control based on mental activity in the handling of people and other business resources were found to be positively related to his management general planning and decision making performance and to his management organizing and staffing performance. However, no significant relationships were found between this attitude, job definition, and the other three management behavior types. Findings pertaining to this attitude partially support the previously stated theoretical discussion.

**Attitude toward progressivism**

This attitude dimension was defined as the extent to which an individual is oriented toward trying and accepting new ideas and practices in his business. The relationships between this attitude and types of management behavior were postulated.

A manager's attitude toward progressivism was found to be positively related to his management general planning and decision making performance and his management organizing and staffing performance. Also weak relationships, not statistically significant, were found between this attitude
and management coordination and communication performance and management controlling performance. Thus one might infer, in general, that a manager's favorable attitude toward trying and accepting new ideas and practices in the business might increase his managerial performance which might lead to greater returns for the business.

**Risk preference**

A manager's attitude toward assuming risk, that is of his willingness to involve elements beyond his control to attain economic ends, appears to be positively related to his general planning and decision making performance. This appears to be consistent with the previous discussion of the function of general planning and decision making. This attitude is also related to the coordination and communication performance which theoretically is important in increasing the efficiency of the business. Findings also show that manager's risk orientation is not related to their organizing and staffing, directing and leading, and controlling processes. One might conclude that as measured in this study managers with higher risk orientation perform better in setting their overall policies, but risk orientation is not related to implementing these policies.

**Tradition**

This attitude dimension was defined as the degree to which a manager prefers traditional means of managing a business. Negative relationships were hypothesized between this attitude and types of management behavior. Findings pertaining to this attitude do support the hypothesized negative relationships between this attitude and management general planning and decision making, management organizing and staffing, and management
coordination and communication. These findings partially support the previously stated theoretical discussion.

Knowledge

An individual's knowledge is defined as the information which helps him to set a context for a social phenomena to be more easily comprehended. The individual's knowledge was assumed theoretically to be related to his management behavior. Thirteen knowledge variables were used on the empirical level to test the general level concept. Sixty-five empirical hypotheses were used to test the general hypothesis. Data in this study shows support for sixteen empirical hypotheses. Findings pertaining to each knowledge dimension in this study will be discussed in the following.

Years of formal education

Findings pertaining to this variable indicate positive relationships between a manager's years of formal education and his management general planning and decision making performance, management organizing and staffing performance, management coordination and communication performance, and management controlling performance. However, the data do not support the hypothesized relationship between a manager's years of formal education and his management directing and leading performance. Findings pertaining to this variable show its relative importance in management

Years of vocational agriculture

Data do not support any of the hypothesized relationships between this variable and the five types of management behavior. Thus one might conclude that this variable taken alone makes no difference in the performance
of management functions in a management setting.

**Management training**

The data shows support to the hypothesized relationship between a manager's management training and his management general planning and decision making performance. The findings show no significant relationship between this variable and the other four types of management behavior. Thus it is apparent that the type of management training received helps the manager mainly in the general planning and decision making processes.

**Specialized training**

A manager's specialized training appears to be related to his management general planning and decision making performance and management controlling performance. This may indicate that specialized training programs received do emphasize the importance of planning and controlling over the implementation of the planned programs in any business operation. One might infer that emphasis on other elements of management in training programs might be helpful in increasing the manager's management performance in general.

**Years of management experience**

This variable shows no statistically significant relationship with any of the manager types of management behavior. It was argued theoretically that this variable is related to management performance, however, data show no support to the theoretical discussion. One reason might be offered to explain the lack of support is that hypothesized relationships might be curvilinear rather than linear as it was hypothesized before.
Farm work experience

This variable also shows no significant relationship with any of the manager management behavior types.

Years as the manager of the cooperative association

Data do not support any of the hypothesized relationship between this variable and the manager types of management behavior. Findings relevant to this variable may suggest that the hypothesized relationships between this variable and a manager type of management behavior may be curvilinear rather than linear, thus might require different types of statistical techniques to test their significance.

Chemical knowledge

Level of chemical knowledge appears to be related to management organizing and staffing performance and management controlling performance. A slight positive relationship was found between this variable and management coordination and communication performance. Findings show no statistically significant relationships between this variable and performance on any of the other functions of management. Thus findings may indicate the importance of chemical knowledge in organizing and staffing the business which might increase the services of the association to its clients. Furthermore, chemical knowledge may help the manager in the controlling processes which in turn might lead to higher returns for the cooperative association. Lack of support to the other hypothesized relationships may be due to the limitations of the study and limitations of the empirical measures which were developed and used in this study.
Fertilizer knowledge

Level of fertilizer knowledge shows no statistically significant relationships with any of the manager types of management behavior. However, it should be noted that slight relationships were found between this variable and management general planning and decision making performance, management organizing and staffing, management coordination and communication and management controlling.

Finance knowledge

Level of finance knowledge is positively and significantly related to a manager's management general planning and decision making performance, management coordination and communication performance, and management controlling performance. This may indicate the importance of level of finance knowledge in management in general. Finance knowledge helps the manager in setting present as well as future programs for his business, in other words it helps him in setting the planning horizon for his business operation. It helps him in controlling the outcomes of the business.

Knowledge about money value

Data relevant to this variable shows no support to the hypothesized relationships between this variable and types of management behavior. A possible explanation for lack of support to the hypothesized relationship is that operational managers are more concerned with short term programs rather than long term programs which requires high level of knowledge about money value.
Knowledge about profit building

A manager's level of knowledge about profit building was found to be positively and significantly related to his management general planning and decision making performance, management coordination and communication performance, and management controlling performance. Also a slight relationship was found between this variable and management organizing and staffing performance. These findings may indicate the relative importance of knowledge about profit building in most phases and processes of management.

Knowledge about margin determination

It was argued theoretically that a manager's knowledge about margin determination helps him in his management performance, especially in setting plans for the business and determining levels of inputs to maximize the output of his business operation from the available resources. A manager's level of knowledge about profit building was found to be positively and significantly related to his management coordination and communication performance. Slight relationships were found between this variable and management general planning and decision making performance, management organizing and staffing performance, and management controlling performance. Thus one might infer that data, in this study, give little support to the hypothesized relationships between knowledge about margin determination and types of management behavior.

In conclusion, data in this study show little support to the general hypothesis, that is about the relationship between a manager's knowledge and his management behavior.
Job Satisfaction

It was assumed theoretically that a manager's job satisfaction is related to his management behavior. Five empirical hypotheses were used to test the general hypothesis. The relationships between a manager's job satisfaction and his types of management behavior do not appear to be statistically significant. A slight relationship was found between this variable and management directing and leading performance. Two reasons could be stated as explanations for lack of support by empirical measures to the hypothesized relationships between this variable and types of management behavior. These are: (1) the limitations of the study, and (2) the lack of highly developed empirical measures. Finally it might be stated that job satisfaction data utilized in this thesis do not give support to the theoretical presentation pertaining to it.

Sources of Information

Data obtained on sources of information as measured by the individual's sources of management information and the individual's sources of product information scores, give little support to the general hypothesis that there is a relationship between a manager's sources of information and his management behavior. Findings pertaining to each of the two dimensions of sources of information will be discussed in the following.

Sources of management information

A manager's sources of management information appears to have relationship with his management organizing and staffing performance. Data do not support any of the hypothesized relationships between this variable and the other four types of management behavior. As previously
stated the board of directors carry most of the general planning and decision making processes in the business, thus leaving very few areas for the operational manager. Based on the findings and previous discussion one might infer that most managers do use sources of management information in their management organizing and staffing processes. This seems logical since most managers do start with limited resources and generally spelled overall policy for the businesses, thus the only way to maximize their returns is through improving the organizational structure of the business and staff it with highly qualified personnel which they believe will ultimately lead to efficient use of the available resources.

Sources of product information

The relationship between sources of information and management behavior was discussed theoretically. It was concluded that sources of information will feed in information to the individual cognition upon his exposure to these sources. These bits of information may bring change in the individual cognitive world and in turn may affect or bring change to his action or behavior. It was postulated, on the basis of the theoretical discussion, that a manager's sources of product information are related to his types of management behavior. Sources of product information was found to be positively and significantly related to management directing and leading performance. A slight relationship also was found between sources of product information and management coordination and communication performance. No significant relationship was found between this variable and the other three types of management behavior. Thus the above findings support the theorem that product information might help
the manager in his directing processes and leading actions which might ultimately increase the efficiency of the association and in turn its economic performance.

In conclusion, one might state that these data do not strongly support the general hypothesis.

**Competition**

Data obtained on competition variables give very little support to the general hypothesis that there will be a relationship between competition in the market areas serviced by the association and the manager management behavior.

Data do support only the hypothesized relationship between the number of similar businesses in the market areas serviced by the association and the manager of the association management organizing and staffing performance. Two reasons could be stated as explanations for lack of support to this general hypothesis. These are: (1) most variables used to operationalize competition in this study rely heavily on the manager's perception of competition, thus they are not strong measures of competition, and (2) the lack of highly developed empirical measures.

**Efficiency of the Business Association**

It was assumed theoretically that types of management behavior are related to the efficiency of the business association in which management processes are carried out. Two variables were used on the empirical level to test the general level concept. Ten empirical hypotheses were used to test the general hypothesis. Data, in this study, shows support for two empirical hypothesis. Findings pertaining to each dimension of the above variable are presented in the following.
**Fertilizer sales**

The relationships between management organizing and staffing performance and management coordination and communication performance and fertilizer sales of the cooperative association were found to be positively and statistically significant. Slight relationships between management general planning and decision making performance and management controlling performance and fertilizer sales of the association were found. On the basis of the findings, it might be assumed that the higher the manager coordination and communication performance in the cooperative association the higher will be the fertilizer sales of this association. Thus the findings pertaining to this variable partially support the previously stated theoretical discussion. However, no wide scope generalizations can be made until this study is replicated and its measures retested to prove its validity and reliability in different places and different periods of time.

**Cost per dollar sales**

It was postulated that types of management behavior are negatively related to the cooperative association's cost per dollar sales which has been used throughout the study as indicator of the efficiency of the cooperative association. Findings from this study show no support to any of the hypothesized relationships between types of management behavior and this variable. Three reasons may be stated as possible explanations to the lack of support on the part of the data relevant to this variable. These are: (1) the cooperative association's cost per dollar sales may be a poor measure of its efficiency, (2) the limitations of the empirical
measures used, and (3) limitations of the study in general and the sample in particular.

Relative Economic Success of the Association

The analytical model of this study assumed that types of management behavior in the farmer cooperative association are related to relative economic success of that association as it is measured by its average net operating revenue in dollars. Five empirical hypotheses were used to test the general hypothesis (General hypothesis 7). A brief discussion of the findings pertaining to this variable is presented in the following.

It was found that a manager's management general planning and decision making performance, management organizing and staffing performance, and management coordination and communication performance are positively and significantly related to relative economic success and/or economic performance of the farmer cooperative association. A possible conclusion might be that the above three areas of management are the crucial elements of management in farmer cooperative associations studied. However, theoretically one could not deny the importance of the other two areas, that is of directing and leading and controlling. One reason of lack of support to those areas in this study is that it is hard in practical life, especially in relatively small businesses, to separate the five areas from each other thus measuring performance on each area becomes rather an arbitrary and difficult task.
Multiple Relationships

In regression analysis the independent variables in each case are considered to be parts of an interactive system, each having an identifiable effect, but having their influence in combination with the other variables. However, this is not to imply that all variables (or factors), in every regression equation, are of equal importance; some variables may be more relevant to a particular decision or act than others and therefore would exert a greater influence. To determine the relative importance of each independent variable in the analysis, the regression equations were computed and are given in the preceding chapter. The regression equations also indicate the relative contribution of each independent variable in the analysis to the prediction of the dependent variable. The partial regression coefficients in the regression equations will be explained in the following manner. The individual's management general planning and decision making performance score will decrease an average of 0.0016 for each unit of the individual's attitude toward profit accumulation score (variable $X_7$ in data used in testing E. H. 156). In similar manner the other variables in the regression equations could be explained.

In general the data of this study do support most of the hypothesized multiple relationships. Since the hypothesized multiple relationships do present the previously developed analytical model in this thesis, it is derived that data of this study do support the developed analytical model.
General Discussion and Assessment

The developed analytical model did prove to be a useful framework in this study. It did provide a generally acceptable framework to encompass all the variables of concern to this study. It is the author's hope that this developed model will be used in the forthcoming research concerning human behavior and its output and/or consequences.

In the theoretical orientations, types of management behavior were discussed as being separate from each other, however, the outcome of this study show that it is hard in real management setting, especially in small business operations, to draw the line between each type of management behavior, thus measuring types of management behavior becomes rather an arbitrary and difficult task.

The findings of this study tend to indicate that knowledge variables are closely related to types of management behavior more than the other variables included in this study. They also tend to indicate that knowledge variables are the best predictors of types of management behavior. However, it may be noted that the emergence of knowledge variables as the best predictors may be due to the preciseness of their measures and may be their true representation of the operationalized concept, that is of manager's knowledge.

An additional major factor affecting the two variables relationships obtained between all the variables used in this study should be noted. The technique of correlational analysis yields a coefficient which is a point estimate within a confidence interval of the degree of relationship. With a sample size of 98, the possible variation of this point estimate, i.e., the confidence interval, is relatively large. This should be kept
in mind when interpreting these findings.

**Conclusion**

Based on the theoretical discussion and the outcome of this study, one might conclude that the developed analytical model is valid and could be used either in predicting types of management behavior or the economic performance and/or the relative economic success of the agricultural marketing cooperatives. However, one should not ignore the possible usefulness of that model in understanding and studying human behavior or action and its possible outcome and/or consequences in general. Thus the developed model might be considered as one of the major contributions of this study.

Based on the findings of this study, one might conclude that individual's knowledge tends to highly affect his behavior, management behavior in this case, and in turn the outcome and consequences of his behavior practices, the efficiency of the cooperative association and its relative economic performance in this study.

**Suggestions for Future Research**

The suggestions for future research are made on the basis of the findings of this study and its weaknesses as judged by the author.

1. In general, it is concluded that this analysis supports the general behavioral model, namely the developed analytical model, used to generate hypotheses. However, it should be noted that future research might further develop this model by introducing additional assumptions without violating the
basic assumptions of the model.

(2) Future research might use the analytical model as a basis for developing specific operational and/or predictive models to fit specific situations or research settings.

(3) Future research could also further refine and develop the predictive models developed in this thesis by using techniques such as step-wise regression.

(4) A number of parameters were used as sample restrictions during sampling procedure for this study. The selectivity and homogeneity of the sample, in this study, are considered to be factors contributing to the relatively low relationships reported in the analysis. Future research might ease some of these restrictions in order to get a truly representative sample of the agricultural marketing cooperatives in the studied area.*

(5) The sample of this study is 98 subjects. Future research could use larger samples, i.e., sample of 200 subjects. In general larger samples provide the researcher with more accurate results.

(6) Future research could also further develop the empirical measures used in this dissertation, i.e., develop more items to be used in scaling relevant to each dimension of behavior

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* A detailed description of the sampling procedure used in this study is presented in the Methods chapter.
or by combining some of the measures in order to increase its usefulness and wide scope of applicability.

(7) Future research could use more variables at the empirical level to help in measuring the abstract level concepts with high degree of accuracy.

(8) Future research could use matching techniques to control the extraneous variables. The control of extraneous variables should take into account the influences of independent variables extraneous to the purposes of the study and help minimize, nullify, or isolate their effect. In other words, the variance of such variables is in effect reduced to zero or near zero, or, what amounts to fundamentally the same thing.

(9) Future research could also collect data relevant to the structure and various resources of the cooperative association and compare those variables with the variables of this study. Additional association's variables and situational variables could be included, i.e., general type of farming area and general farm situation in the area, in developing predictive models for management behavior and relative economic success of the business association, that is, farmer cooperative association in this case.

(10) Future research could develop simplified measures of manager, sometimes refer to as dealer, potential and success that could be used by major fertilizer producers
and field representatives to develop a more effective dealer marketing structure.

(11) Future research could further develop a number of criteria for managers, sometimes referred to as dealers, selection, training, and potential for success.
SUMMARY

This dissertation is concerned with human behavior in general and management behavior in particular. It is focused on variables which might be associated with management behavior and in turn with economic performance of farmer cooperative associations.

The specific objectives of this dissertation were as follows: (1) to develop predictive models of typology of management behavior including personal variables and situational variables, (2) to determine the relationships between selected personal variables and management behavior, (3) to determine the relationships between selected situational variables and management behavior, and (4) to determine the relationships between types of management behavior and the economic outputs of farmer cooperative associations.

In this study an attempt has been made to develop an analytical model to encompass the variables which were of central concern. The analytical model was intended to be abstract and general in its orientation in order to give it the merit of elasticity and wide scope of generality and/or applicability. An attempt was made to generate a logically as well as theoretically interrelated set of concepts in this analytical model. The elements and/or the concepts of the model were individual behavior or action, individual personal variables, the situational conditions relevant to the individual actor, outputs of the individual behavior practices, and consequences of the output of the individual behavior practices. The theoretical basis for this model were discussed along with the presentation and discussion of the concepts and/or the elements of the present
study of management behavior or performance in farmer cooperative associations. The first step focused on defining and discussing the environment in which the manager makes and implements his decisions. The second step dealt with human behavior in general, the role of the manager in farmer cooperatives, and types of management behavior in particular. Five types of management behavior were delineated. These were: (1) management general planning and decision making behavior, (2) management organizing and staffing behavior, (3) management directing and leading behavior, (4) management coordination and communication behavior, and (5) management controlling behavior. The third step focused on presenting and discussing some selected individual personal variables and situational variables which were assumed to be related to types of management behavior. The third step followed with theoretical discussion of the output of the individual behavior practices and its consequences. The disciplines from which the concepts, theory and research generalizations were integrated were sociology, social psychology, psychology, business administration, education and economics. From that broader framework, the developed analytical model, hypotheses concerning the expected relationships between the components of the model have been derived.

A probability sample of 98 managers of agricultural marketing cooperatives in the State of Iowa was selected for this study.

Ten general hypotheses presenting the analytical model were derived from the theoretical orientations. A total of 162 empirical hypotheses were used to test the general hypotheses. The empirical hypotheses were derived from the general hypotheses through the sub-general hypotheses and the specific hypotheses.
The ten general hypotheses are:

**General hypothesis 1**: There will be a relationship between a manager's attitudes and his management behavior (or performance). Ten of the forty empirical hypotheses used to test this hypothesis were statistically significant at the specified level of significance that is of 0.05 level of probability.

**General hypothesis 2**: There will be a relationship between a manager's knowledge and his management behavior. Sixteen of the sixty-five empirical hypotheses used to test this hypothesis were statistically significant at the specified level of significance that is of 0.05 level of probability.

**General hypothesis 3**: There will be a relationship between a manager's job satisfaction and his management behavior. Five empirical hypotheses used to test this general hypothesis were found to be not statistically significant at the specified level of significance, that is of 0.05 level of probability.

**General hypothesis 4**: There will be a relationship between a manager's sources of information and his management behavior. Two of the ten empirical hypothesis used to test this hypothesis were found to be statistically significant at the specified level of significance, that is of 0.05 level of probability.

**General hypothesis 5**: There will be a relationship between competition in the market areas serviced by the association and the manager of the association management behavior.
One of the twenty empirical hypotheses used to test this hypothesis appeared to be statistically significant.

**General hypothesis 6**: There will be a relationship between a manager's management behavior practices and the efficiency of the business firm or association.

Two of the ten empirical hypotheses used to test this general hypothesis were found to be statistically significant.

**General hypothesis 7**: There will be a relationship between a manager's management behavior practices and relative economic success of the business firm or association.

Three of the five empirical hypotheses used to test this general hypothesis were found to be statistically significant.

**General hypothesis 8**: There will be a relationship between a manager's selected personal variables, selected situational variables and his management behavior.

Five empirical hypotheses used to test this general hypothesis were found to be statistically significant.

**General hypothesis 9**: There will be a relationship between a manager's selected personal variables, selected situational variables, his management behavior practices (performance) and the efficiency of the association which he manages.

Two empirical hypotheses used to test this general hypothesis were found to be statistically significant.

**General hypothesis 10**: There will be a relationship between a manager's selected personal variables, selected situational variables, his management behavior practices (performance),
the efficiency of the association which he manages and the
economic success and/or performance of that association.
Data in this study show support to this general hypothesis.
The statistical methods used were zero order correlation, multiple
linear regression, and F test.

Based on the theoretical discussion and the outcome of the study it
was concluded that the developed analytical model is valid and could be
used either in predicting types of management behavior or the economic
performance and/or the relative economic success of the agricultural
marketing cooperatives. It was concluded also that the analytical model
might be used as a useful tool in studying and/or predicting human behavior
in general and the output of human behavior practices and its consequences
in particular.

Limitations of this dissertation and suggestions for future research
were discussed.

Finally, it is hoped that both the developed analytical model and
the research findings of this dissertation will provide a point of
departure or some relevant insights for future research on action and out-
comes of action especially in agricultural marketing cooperatives.
LITERATURE CITED


42. Hobbs, Daryl Jerome, Beal, George M. and Bohlen, Joe M. The relation of farm operator values and attitudes to their economic performance. Iowa State University of Science and Technology, Department of Sociology and Anthropology, Rural Sociology Report 33. 1964.


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APPENDIX A

Each of the management behavior (performance) questions as they appeared in the schedule are presented below. Scoring of the individual response to each question is also presented along with the question. They are grouped under the concepts which they operationalize and are numbered consecutively. An asterisk (*) denotes those items which formed the final measures.

General Planning and Decision Making Items

*1. In making a major decision, what steps or processes do you go through?

Code

Coded by certainty method.

*2. Once a major decision to make a change has been made, what are some of the things you would do to insure that the implementation of this decision will be successful?

Code

Coded by certainty method.

*3. How do you protect yourself against market price changes on products and supplies in inventory?

Code

Coded by certainty method.

*4. Within the lines, how do you determine what brands and qualities of merchandise to handle?

Code

Coded by certainty method.
5. On what basis do you select your wholesale sources and outlets?

   Code

   Coded by certainty method.

6. What are the major factors you have taken into consideration in deciding (or in making recommendations to your board) to add or to drop existing lines of business or reorganizing your business to place greater emphasis on a given line?

   Code

   Coded by certainty method.

8. Most businesses attempt to create a favorable image with their customers. What are the essential features or ingredients in the image you are trying to create for this business?

   Code

   Coded by certainty method.

Organizing and Staffing Items

1. What factors do you take into consideration in making decisions concerning how your business is divided into departments and functions? (Include decisions such as those concerning functions to be performed and departments to have.)

   Code

   Coded by certainty method.

2. What methods do you use to determine the number and qualifications of the employees needed in your business firm?

   Code

   Coded by certainty method.
*3. How do you determine the responsibilities and work loads of each of your employees?
   
   Code
   
   Coded by certainty method.

*4. What type of job descriptions do you have for each employee position in your business?
   
   Code
   
   1 = do not write job descriptions
   2 = have verbal job descriptions for all employees
   3 = have written job descriptions for supervisory employees only
   4 = have written job descriptions for all employees

Directing and Leading Items

*1. Does this business have an incentive plan for its employees?
   
   Code
   
   1 = no
   2 = yes

*2. For which employees do you have a plan?
   
   Please indicate their positions.

   Code
   
   0 = does not apply
   1 = no plan
   2 = manager and assistant manager only
   3 = sales people only
   4 = manager, assistant manager and sales people
   5 = all employees
Coordination and Communication Items

1. Which one of these statements best describes the way you feel about key employee relationships with patron members?

**Code**

4 = They have a responsibility to keep themselves well informed and make recommendations on all of our major product lines

3 = They have a responsibility to pass on only that information about our major product lines which is requested by the customer

2 = They should be extremely cautious in making recommendations about any major product line since a poor recommendation could result in a loss of customers

1 = They should provide the products requested by customers, but should make no recommendations about their uses

2. Selling is a matter of getting your ideas and product information to purchasers. What factors do you take into consideration in getting this job done?

**Code**

Coded by certainty method.

3. As you think of merchandising your products, do you classify your farmer customers into different groups and use different selling approaches on them?

**Code**

Coded by certainty method.

(If yes to the above question):

What are the major factors you take into consideration in classifying them?
4. How do you communicate the limits on the amount and time of credit repayment to your customers?

Code

Coded by certainty method.

(The above two items are coded as one item.)

5. How is information in your business communicated from you to your employees?

Code

Coded by certainty method.

Controlling Items

1. Do you prepare a budget for your next operating year?

Code

Coded by certainty method

(If yes to the above question.):

What types of budgets do you use and how are they employed?

Code

Coded by certainty method.

(The above two items are coded as one item.)

2. What kinds of ratios do you use to determine how efficient you are in your business? What are the factors you take into consideration in deciding on what these ratios should be?

Code

Coded by certainty method.
3. Do you compare actual results to your budget?

   Code
   1 = no
   2 = yes

4. (If yes to the above question):

   How often do you make this comparison?

   Times per month  Times per year
   1  2  3  4  6  4  3  2  1  0
APPENDIX B

The following are the items used in the final analysis of each attitude scale.

**Profit Accumulation Scale**

<table>
<thead>
<tr>
<th>Item number</th>
<th>Scoring</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+</td>
<td>The greatest satisfaction in being a manager comes in running a highly profitable business.</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>The most successful manager is the one who makes the most profit for his business.</td>
</tr>
<tr>
<td>3</td>
<td>+</td>
<td>The only real goal in managing is to maximize business profits.</td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td>The manager's most important objective should be to make the business profitable.</td>
</tr>
</tbody>
</table>

**Individualism Scale**

<table>
<thead>
<tr>
<th>Item number</th>
<th>Scoring</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+</td>
<td>Having the freedom to make up my own mind, is to me, one of the major advantages in management.</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>Perhaps the greatest reward in a management position is the opportunity to make your own decisions.</td>
</tr>
<tr>
<td>3</td>
<td>+</td>
<td>I don't like to feel obligated to people.</td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td>I feel the manager who has proven his financial ability should be given a strong voice in his community.</td>
</tr>
<tr>
<td>5</td>
<td>+</td>
<td>One of the best ways to get ahead financially is to be independent in your decision making.</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>In the long run, a manager is better off to establish a pattern and stick with it rather than to continually change his business operation.</td>
</tr>
<tr>
<td>Item number</td>
<td>Scoring</td>
<td>Item</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>One of the best guides in making decisions is what has worked in the past.</td>
</tr>
<tr>
<td>8</td>
<td>+</td>
<td>The influence a manager exerts really decides the financial outcome of a cooperative.</td>
</tr>
<tr>
<td>9</td>
<td>+</td>
<td>One of the best single indicators of whether or not a man will make a good manager is his ability to make his own decisions.</td>
</tr>
<tr>
<td>10</td>
<td>+</td>
<td>A person should always be master of his own fate.</td>
</tr>
<tr>
<td>11</td>
<td>+</td>
<td>A man in business for himself should be free to make his own decisions without any outside interference.</td>
</tr>
<tr>
<td>12</td>
<td>+</td>
<td>People at all levels in local cooperatives possess the capacity to exercise imagination, ingenuity, and creativity in the solution of problems.</td>
</tr>
<tr>
<td>13</td>
<td>+</td>
<td>For the most part an individual should &quot;go it alone&quot; and make his own decisions.</td>
</tr>
<tr>
<td>14</td>
<td>+</td>
<td>One of parents' greatest obligations is to teach their children to make decisions on their own uninfluenced by what others may say or do.</td>
</tr>
<tr>
<td>15</td>
<td>+</td>
<td>An individual should try to solve his own problems by himself.</td>
</tr>
</tbody>
</table>

**Risk Preference Scale**

<table>
<thead>
<tr>
<th>Item number</th>
<th>Scoring</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+</td>
<td>I regard myself as the kind of person who is willing to take a few more risks than the average manager.</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>I would rather take more of a chance on making a big profit than to be content with a smaller but less risky profit.</td>
</tr>
<tr>
<td>Item Number</td>
<td>Scoring</td>
<td>Item</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>3</td>
<td>+</td>
<td>Those managers who have made the greatest financial success have been willing to deviate from what the customers considered to be right.</td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td>It's good for a manager to take risks when he knows his chance of success is fairly high.</td>
</tr>
<tr>
<td>5</td>
<td>+</td>
<td>A manager must be willing to take a great number of risks to stay in business</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>Most managers are becoming so oriented toward making money, they don't have time to enjoy life.</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>Many of the new merchandising ideas that come out these days are not practical for the average dealer.</td>
</tr>
<tr>
<td>8</td>
<td>+</td>
<td>A co-op manager can be successful even if his member-patrons are somewhat unhappy with his business practices.</td>
</tr>
<tr>
<td>9</td>
<td>+</td>
<td>A manager must be willing to take a great number of risks to get ahead.</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>Most workers want to be directed and controlled.</td>
</tr>
<tr>
<td>11</td>
<td>+</td>
<td>Managers who are willing to take more than average chances usually do better financially.</td>
</tr>
</tbody>
</table>

**Job Definition Scale**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Scoring</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+</td>
<td>Jobs should contain as much challenge and opportunity as possible.</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>One of the most important things a manager can do is to work out a long-range plan for his business operation.</td>
</tr>
<tr>
<td>3</td>
<td>+</td>
<td>Obtaining information on management is a necessary activity for the successful functioning of any manager.</td>
</tr>
</tbody>
</table>
Item Number | Scoring | Item
--- | --- | ---
4 | + | Most managers can improve their income through better management instead of blaming the circumstances.
5 | + | A good manager can overcome most marketing problems that he faces.
6 | + | Good managers take the time to seek out information and use this information in making decisions.
7 | + | I admire the manager who can get a job done most efficiently due to effective planning.
8 | + | It is important to take time to consider the alternative ways of doing a job before deciding which one is best.
9 | + | A manager must keep up and apply new methods in business management to be able to compete.
10 | + | Time spent in learning about new management practices is time well spent.
11 | + | In most cases a manager can save time in the long run by first sitting down and figuring the problem out.
12 | - | Attending a short course where new ideas might be presented is usually a waste of time.
13 | + | The price a person has to pay for financial success is not worth it.
14 | + | The independent spirit—spurning all aid, needing no one, self-reliant and free—this is man at his best.
15 | + | Good management is the most important factor in making a business successful.
16 | - | Most dealers spend too much time and effort in keeping themselves up-to-date on new merchandising practices.
<table>
<thead>
<tr>
<th>Item number</th>
<th>Scoring</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>+</td>
<td>In order to stay in business a dealer has to keep learning and trying new things.</td>
</tr>
<tr>
<td>18</td>
<td>+</td>
<td>If a man wants a thing done right, he must do it himself.</td>
</tr>
<tr>
<td>19</td>
<td>+</td>
<td>A manager's thinking and planning counts for more in business success today than do his regular chores.</td>
</tr>
<tr>
<td>20</td>
<td>+</td>
<td>Hours spent by a manager evaluating and making future plans for his business are generally more profitable than hours spent helping with the mixing or grinding operations.</td>
</tr>
<tr>
<td>21</td>
<td>-</td>
<td>Many managers spend too much time and effort trying to keep themselves up-to-date on new things in business management.</td>
</tr>
<tr>
<td>22</td>
<td>+</td>
<td>Good management can eliminate most of the risks involved in any business.</td>
</tr>
<tr>
<td>23</td>
<td>+</td>
<td>I really respect an individual who makes his own decisions and is willing to stand behind them.</td>
</tr>
<tr>
<td>24</td>
<td>+</td>
<td>Under the right conditions workers will seek and accept responsibility.</td>
</tr>
<tr>
<td>25</td>
<td>-</td>
<td>A new manager would do well to find out the opinions of more experienced managers before making decisions.</td>
</tr>
<tr>
<td>26</td>
<td>-</td>
<td>There are more important things in life than trying to make a few extra dollars.</td>
</tr>
<tr>
<td>27</td>
<td>+</td>
<td>Some new ideas may hurt a business, but I don't let that stand in my way of trying some of the better ones.</td>
</tr>
<tr>
<td>28</td>
<td>-</td>
<td>You can really get farther by talking with and cooperating with people.</td>
</tr>
<tr>
<td>29</td>
<td>-</td>
<td>Thinking, reading, and planning are not really important to me in managing this business.</td>
</tr>
<tr>
<td>Item number</td>
<td>Scoring</td>
<td>Item</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>30</td>
<td>+</td>
<td>Many managers should spend more time analyzing their records for operational efficiency and less time actually assisting in the keeping of business records.</td>
</tr>
<tr>
<td>31</td>
<td>+</td>
<td>A real problem that many farm supply managers have is that they don't think through a set of goals and objectives for their business operation.</td>
</tr>
<tr>
<td>32</td>
<td>+</td>
<td>A co-op manager is in a good position to compete favorably in most any locality.</td>
</tr>
<tr>
<td>33</td>
<td>+</td>
<td>Man will exercise self-direction and self control in the service of worthwhile objectives.</td>
</tr>
<tr>
<td>34</td>
<td>+</td>
<td>While it is true that a person may become too oriented toward making money, many managers would be better off if they would spend more time trying to make their business pay.</td>
</tr>
<tr>
<td>35</td>
<td>+</td>
<td>Most managers can improve their income through harder work instead of blaming the circumstances</td>
</tr>
<tr>
<td>36</td>
<td>+</td>
<td>One of the most important things a manager can do is attend a training program where new ideas might be presented.</td>
</tr>
<tr>
<td>37</td>
<td>-</td>
<td>A manager should always have a contingency fund in case of emergency.</td>
</tr>
<tr>
<td>38</td>
<td>+</td>
<td>One of the most important things a manager can do is to be sure a good set of records is kept.</td>
</tr>
<tr>
<td>39</td>
<td>-</td>
<td>One of the most undesirable things about being a manager of a cooperative is that too many decisions are made for you by the board of directors.</td>
</tr>
<tr>
<td>40</td>
<td>+</td>
<td>The best way to avoid trouble is to be as independent as possible.</td>
</tr>
<tr>
<td>Item number</td>
<td>Scoring</td>
<td>Item</td>
</tr>
<tr>
<td>-------------</td>
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<td>------</td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td>It is more important for managers to make decisions on the basis of past experience and rules of thumb than to try to find new ways of doing things.</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>New ideas in managing are all right but I don't use very many of them.</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>Before trying any new practice or idea, it is pretty wise to wait and see how it is working out for some of the other businesses.</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>Many managers spend too much time trying to think through alternate ways of doing a job rather than going ahead and doing the job the way they already know.</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>It is more important to me to be known as a person who gets along well with others and has a lot of friends rather than a person who likes to make decisions for himself.</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>A manager really can't afford to experiment with different ideas in the business.</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>A manager is better off to continue traditional management practices since many of the new-fangled ideas are not suited to his business operation.</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>If I feel that the odds are greater than 60-40 against an alternative course of action paying off, I look for other choices.</td>
</tr>
<tr>
<td>9</td>
<td>+</td>
<td>In deciding about making changes in his business, a manager's first consideration should be &quot;is it profitable&quot;.</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>It is more important for the dealer to make decisions on the basis of past personal experience than to try to find out new ways to do things.</td>
</tr>
<tr>
<td>Item number</td>
<td>Scoring</td>
<td>Item</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>It is better to stay as a manager of a firm with a lower salary and fewer problems than change to a firm with a higher salary and many problems.</td>
</tr>
<tr>
<td>12</td>
<td>-</td>
<td>A manager's willingness to spend some time assisting with day to day operations, such as with the grinding operations, is more important in a successful business than all the new ideas he reads or hears about.</td>
</tr>
<tr>
<td>13</td>
<td>-</td>
<td>The best way to solve problems is to dig in and work on them immediately instead of wasting time trying to think of better or easier solutions.</td>
</tr>
</tbody>
</table>

**Tradition Scale**

<table>
<thead>
<tr>
<th>Item number</th>
<th>Scoring</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>A manager should never borrow large sums of money for operating capital.</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>A manager's most important asset is a &quot;strong back&quot;.</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>If a man is going to hire labor he should be willing to work right along side the man he has hired.</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>If I had a choice I would rather work with my hands than read a book.</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>The manager who gets ahead fastest is the one who sticks to the old proven ways of doing.</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>There are so many desirable things in life that a person can afford to get along on a lower income to maintain these advantages.</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>If you want to increase worker efficiency you have to apply more pressure.</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>Most workers don't really care whether a job is interesting and challenging.</td>
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<td>Actually you can rely on very few people.</td>
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Independence Scale

1 - Managing would be extremely difficult without the advice and help of my board.

2 - The world is simply too complex for a man to be completely independent.

3 + The man who stands alone is the man who is admired.

Management Orientation Scale

1 + The slack seasons in farm product handling can be overcome readily by good planning by the manager.

2 + A good co-op manager does not have great difficulty overcoming stiff local competition.

3 + Losses due to market change can be effectively hedged against.
APPENDIX C

Job Satisfaction Items

Job satisfaction items as they appeared in the interview schedule are presented below. An asterisk (*) denotes those items which formed the final scale.

*1. How satisfied are you with the authority you have been given by your board of directors to do your job?

*2. How satisfied are you with your present position when you compare it to similar managerial positions in the state?

3. How satisfied are you with the progress that you are making toward the goals which you set for yourself in your present position?

*4. How satisfied are you that the people of your community give proper recognition to your work as a manager of a cooperative?

*5. How satisfied are you with your present salary?

*6. How satisfied are you with the amount of time which you must devote to your job?

7. How satisfied are you with the amount of interest shown by the community in its cooperative?

*8. How satisfied are you with your present job when you consider the expectations you had when you took the job?

9. How satisfied are you with the work that you do as the manager of a cooperative?

*10. How satisfied are you with the level of challenge and responsibility you are faced with in your present position?

*11. How satisfied are you with the amount of authority you are given for the tasks you are expected to perform?
APPENDIX D
Table 81. Intercorrelations of empirical measures

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\(^a\)Correlation coefficient of 0.200 or greater required for significance at 0.05 level of significance.

\(^b\)Correlation coefficient of 0.265 or greater required for significance at 0.01 level of significance.
ace at 0.05 level of probability.
0.01 level of probability.
The variables shown in Table 81 are as follows:

\(X_1 = \text{Management general planning and decision making performance}\)

\(X_2 = \text{Management organizing and staffing performance}\)

\(X_3 = \text{Management directing and leading performance}\)

\(X_4 = \text{Management coordination and communication performance}\)

\(X_5 = \text{Management controlling performance}\)

\(X_6 = \text{Attitude toward profit accumulation}\)

\(X_7 = \text{Perception of job}\)

\(X_8 = \text{Attitude toward assuming risk}\)

\(X_9 = \text{Attitude toward progressivism}\)

\(X_{10} = \text{Attitude toward individualism}\)

\(X_{11} = \text{Attitude toward traditional means of management}\)

\(X_{12} = \text{Attitude toward independence}\)

\(X_{13} = \text{Attitude toward management orientation}\)

\(X_{14} = \text{Years of formal education}\)

\(X_{15} = \text{Years of vocational agriculture}\)

\(X_{16} = \text{Years as manager of the farmer cooperative}\)

\(X_{17} = \text{Management experience}\)

\(X_{18} = \text{Management training}\)

\(X_{19} = \text{Farm work experience}\)

\(X_{20} = \text{Any specialized training}\)

\(X_{21} = \text{Chemical knowledge}\)

\(X_{22} = \text{Fertilizer knowledge}\)

\(X_{23} = \text{Finance knowledge}\)

\(X_{24} = \text{Knowledge about money value}\)
$X_{25} = \text{Knowledge about profit building}$

$X_{26} = \text{Knowledge about margin determination}$

$X_{27} = \text{Job satisfaction}$

$X_{28} = \text{Sources of management information}$

$X_{29} = \text{Sources of product information}$

$X_{30} = \text{Number of similar businesses in the trade area}$

$X_{31} = \text{Competition rate}$

$X_{32} = \text{Restrictions of the competitive situation}$

$X_{33} = \text{Perception of success in competition}$

$X_{34} = \text{Fertilizer sales categories}$

$X_{35} = \text{Cost per dollar sales}$

$X_{36} = \text{Average net operating revenue}$
Hello! My name is ______________. I'm representing the Iowa State University Agricultural Experiment Station in Ames which is conducting a research study of Iowa farmer cooperatives. In the early phases of this project you were interviewed about the goals of the cooperative and received a package of materials to complete and return to Ames. We have greatly appreciated your cooperation thus far in the study. The interviewer in June as well as the letter from Mr. Pepper pointed out that the final phase would be an interview in July. In this interview, we will cover management areas and business activities which were not covered earlier. Your assistance in this phase and earlier phases will make an important contribution to this research effort.

In this phase, we are interested in your opinions and ideas as an individual manager about business management and business activities. As in the previous phases, all information you give us will be treated as strictly confidential and will never be identified with your name.

May I take time now to interview you? If not, may we set up an appointment which would be convenient for you?

Record of calls -- to be used for each call made

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(If you failed to complete any or part of the interview, state reason here)
Hand Respondent Cards

We will be using these cards throughout the course of this interview.

First, we would like to discuss your ideas about managing this business and cooperatives in general.

Please turn to CARD 1.

1. We would like to have you indicate your evaluation of the importance of your minor departments to your total business from this list of statements.

Do you consider your minor departments to be:

a. Good money makers in themselves .................................................. 4
b. Important as complementary lines to round out my business but less profitable than my major lines .................................................. 3
c. Important as additional customer services ........................................ 2
d. Not as money-makers, but generally it is important to carry these lines to compete with other businesses ........................................ 1

Please turn to CARD 2.

2. How important do you think it is for a dealer to keep up with the latest management practices? Select a number from one to five to indicate its importance.

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<tbody>
<tr>
<td>Not Important</td>
<td>Extremely Important</td>
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</table>

3. How important do you think it is for a dealer to keep up with the latest product information? Select a number from one to five to indicate its importance.

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<tr>
<td>Not Important</td>
<td>Extremely Important</td>
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</table>

4. How important is it to you to maintain the premises of your business neat and orderly? Select a number from one to five to indicate its importance.

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<tbody>
<tr>
<td>Not Important</td>
<td>Extremely Important</td>
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</tbody>
</table>

5. How many other businesses with similar major product lines are operating in your trade area?
Now on CARD 3.

6. In general, how would you rate the competition in this trade area?
   a. very strong competition ........................................... 1
   b. strong competition ................................................... 2
   c. mild competition .................................................... 3
   d. weak competition ................................................... 4
   e. very weak competition .............................................. 5

Please turn to CARD 4, part A.

7. How restrictive is this competitive situation on your ability to be a successful manager? Select a number from the categories that best describes your feeling.

1 2 3 4 5 6 7 8 9 10 11
Not restrictive at all Very restrictive

8. How successful are you in competing in this situation? Select a number from the categories that best describes your feeling.

1 2 3 4 5 6 7 8 9 10 11
Not doing well at all Very successful

9. Using the categories on CARD 5, how frequently do you participate in the activities of the organizations in this community?
   a. often ................................................................. 4
   b. sometimes ........................................................... 3
   c. rarely ................................................................. 2
   d. never ................................................................. 1

10. To how many local community organizations do you belong?
    ___________________________
11. In which three(3) are you most active?

* [Interviewer: Be sure to get these in a 1, 2, 3 order.]

1. 

2. 

3. 

Please turn to CARD 6.

12. What effect do you think it has on a dealer's success in this community if he belongs to and participates in community organizations such as farm organizations, civic clubs, church, etc.?

a. increases business greatly ........................................4

b. increases business somewhat ..................................3

c. has no effect on business .................................2

d. decreases business somewhat ..............................1

Please turn to CARD 7.

We would like to know where you get your information to assist you in the management of this business. On CARD 7 are listed a number of possible sources of information.

13. What sources of information about managing are you presently using? 

* [Be sure the respondent looks over the entire list.]

Please rank the three most useful to you.

14. What sources of information about products and their uses are you presently using? Please rank the three most useful to you.

<table>
<thead>
<tr>
<th>Managing Not Using</th>
<th>Rank</th>
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<tbody>
<tr>
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<tr>
<td>2</td>
<td>1</td>
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</table>

<table>
<thead>
<tr>
<th>Product Not Using</th>
<th>Rank</th>
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<tbody>
<tr>
<td>Using</td>
<td></td>
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<tr>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Clinics and short courses sponsored by commercial companies.

2. Farm magazines: List

3. Magazines subscribed to by dealers only: List

4. Good managers in your area.
<table>
<thead>
<tr>
<th>Using</th>
<th>Not Using</th>
<th>Rank</th>
</tr>
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<tbody>
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<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

5. Iowa State University and extension sponsored clinics and short courses.


7. Commercial company publications and reports.

8. Iowa State University and United States Department of Agriculture publications.

9. County extension personnel.

10. Salesmen for manufacturers or wholesaler.

11. Iowa State University specialists.

12. Manufacturers or their technical representatives.

13. Newspapers

14. General Observation

15. Other: Specify?

16. Other: Specify?

Please turn to CARD 8.

The next set of statements regards employee practices about which managers have varying opinions. We would like to have your opinions about these statements. Using the categories on CARD 8, please indicate simply whether you agree with the statement or whether you disagree with it. After you have made this decision, please indicate how certain you are about this choice by choosing one of the numbers from 1 to 5. Number one (1) indicates you are only slightly certain while number five (5) indicates you are very certain. Numbers 2, 3, or 4 may better describe your position. When this is the case just indicate the appropriate number.

In this series of statements think of each statement as preceded by the phrase "Employee production can be increased by...".

*Interviewer: Read each statement to the respondent. Ask him if he agrees or disagrees with the statement and then have him give you a number to indicate the intensity of his feelings. Encircle the appropriate code. If the respondent refuses to answer or will not give an opinion, encircle both "A" and "D". Remind respondent occasionally of the lead in to the statement.

15. Employee production can be increased by periodically informing employees of their progress on their jobs.
16. Employee production can be increased by allowing employees a great deal of freedom in their jobs.

17. ...interacting socially with employees.

18. ...consulting employees on decisions that affect them.

19. ...seeing that employees feel that they are doing something important.

20. ...being critical of employees.

21. ...often giving up the leadership position to help employees in their work.

22. Employee production can be increased by having flexible policies regarding order and discipline which are dependent upon the situation.

23. ...criticizing employees in public so they can be taught a lesson.

24. ...being forceful in order to get good results with employees.

25. ...doing delegated tasks yourself when they have not been completed.

26. ...putting as much challenge into jobs as is possible.

27. ...being interested in the personal well-being of your employees.

28. ...punishing employees for mistakes instead of rewarding them for superior achievement.
29. Employee production can be increased by informing workers when a change is coming up that will affect their jobs.

30. ...telling employees why their work is important.

31. ...having each person accountable only to the person who delegates authority and responsibility to him.

32. ...applying more pressure.

33. ...telling employees that they're doing good work whether they are or not.

34. ...taking time off the job and helping employees with their personal problems.

35. ...concentrating on the problem rather than the individual in discipline procedures.

36. ...introducing new employees to their jobs by training and educational programs.

37. ...allowing employees to plan their own work as much as possible.

38. ...placing more emphasis on employees and less on productivity.

Now I'm going to read to you a series of statements regarding agricultural chemicals. We would like your opinion about these statements. Please continue to use the categories on CARD 8 without the phrase in front of each statement that we have just been using.

39. The U.S. Dept. of Agriculture has the responsibility to enforce the proper use of insecticides.

40. Chlordane is not a recommended residual fly control which can be sprayed on the walls in a dairy barn.
41. The recommended dosage for spraying 2,4-D on corn at "lay by" time using a drop-extension nozzle is ½ lb. or one pint of ester per acre.

42. When Amino-triazole is applied to thistle patches in a pasture, it is recommended that livestock not be allowed on the treated area for eight months.

43. Amiben is an effective perennial weed killer in soybeans.

44. Corn treated with Toxaphene should not be made into silage.

45. Two pounds per acre of actual Aldrin or Heptachlor which is broadcast and disked-in will control all major soil insects attacking corn on sod ground.

Next we would like to ask you some questions concerning fertilizer and its application. Please turn to CARD 9. For each question select the answer that in your opinion best answers the question.

46. Under adequate moisture conditions, fertilizer applications which increase corn yields can:
   a. decrease the pounds of water needed to produce one bushel of corn
   b. increase the pounds of water needed to produce one bushel of corn
   c. decrease the total amount of water used by the crop
   d. decrease water loss through corn leaves

47. Potash deficiency symptoms on corn can be recognized by a:
   a. light green color of the corn field in general
   b. purpling of the upper corn leaves
   c. browning of the outer margins of the lower corn leaves
   d. yellowing of the mid-ribs of the lower corn leaves

48. If used in the row of corn, the minimum percentage of water soluble phosphorus should be:
   a. 80%
   b. 50%
   c. 20%
   d. 100%
49. Fertilizer nutrients, if needed:
   a. can be insurance against drought for corn if subsoil water is adequate.................................1
   b. cause corn plants to use less total water.................................2
   c. draws corn roots toward it when placed deep in the soil..................3
   d. cause lower leaves of corn to "fire" in dry weather......................4

50. A high percentage of water soluble phosphorus is desirable for:
   a. phosphorus being plowed down for corn.................................1
   b. top dressing established legume meadows..................................2
   c. row fertilizer for corn..................................................3
   d. application on oat-legume seedings.....................................4

Please turn to CARD 10.

51. Maximum chemical availability of P in fertilizer:
   a. occurs for low water soluble materials when they are finely ground and banded in the soil.................................1
   b. occurs for low water soluble materials when pelleted and widely dispersed in the soil.................................2
   c. occurs for high water soluble material when hill dropped or band applied..................................................3
   d. occurs for high water soluble materials when finely ground and widely dispersed in the soil.................................4

52. When sampling soils in Iowa:
   a. take one core for every 10 acres.........................................1
   b. separate fields into separate areas based on soil differences or differences in past management..........................2
   c. subsoil sampling is recommended..........................................3
   d. allow samples to dry thoroughly before sending to the laboratory.................................................................4

53. In taking soil samples, the greatest mistake is to:
   a. mix soil from a wet area and a sloping area into one sample...................1
   b. take too few cores from a single soil type................................2
   c. take too many cores from a single soil type..............................3
   d. include more than ten acres into one sample................................4
54. Nitrogen fertilizer can be applied in different ways. Which one of the following application methods is most effective in increasing corn yields assuming proper application equal N rates, similar weed control and normal rainfall?

a. plow-down application.................................................1
b. disked-in on plowed ground.............................................2
c. pre-plant injections......................................................3
d. side-dressings up to the time the corn is 15 inches tall........4
e. all methods are equally effective.....................................5

55. If a farmer elects to apply all of his fertilizer for corn as a plow-down application at the medium rate, under which one of the following conditions could he expect the most effective use of his fertilizer?

a. a wetter than average growing season.................................1
b. growing season with temperatures higher than average...........2
c. a dryer than average growing season................................3
d. growing season with temperatures lower than average...........4

Please turn to CARD 11.

Now we would like to get your reaction to the following hypothetical problems.

You are advising a farmer who owns 360 acres of crop land. 300 acres are top quality land. 60 acres is land that will raise corn but not as well as the rest of the farm. It would be possible to raise trees on this land that would produce in 10 years.

56. Which of the following alternatives would you recommend to this farmer?

a. raise corn on this 60 acres of land and receive a net profit of $900 per year for 10 years............................................1
b. raise trees on this 60 acres of land and receive $10,000 net profit at the end of 10 years.................................................2

57. What factors did you take into consideration in making this decision?

...........................................................................................................

...........................................................................................................

...........................................................................................................
58. The fertilizer department in a farm supply business showed this financial statement at the close of the last fiscal year.

<table>
<thead>
<tr>
<th>Sales</th>
<th>Margins</th>
<th>Direct Costs</th>
<th>Overhead Costs</th>
<th>Profit</th>
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<td>$500,000</td>
<td>$50,000</td>
<td>$40,000</td>
<td>$15,000</td>
<td>-$5,000</td>
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</table>

What factors should a manager take into consideration in deciding whether or not to drop the fertilizer department? [Probe to get respondent to directly answer the question]

Please turn to CARD 13.

59. When pricing products and services several factors must be taken into account. Under certain conditions it may be wise to maintain a wide margin even at the sacrifice of sales volume while in other instances it would be better to maintain a smaller margin to get increased sales volume.

For each situation, please state whether you would maintain a large margin with the possibility of decreasing the volume, or maintain a small margin with the possibility of increasing the volume.

[Encircle One]

1. Brand handled recognized by customers as superior to that of competitors.
2. Extra services wanted by customers cannot be (or are not) provided.
3. Many other dealers in the trade area have full competitive lines.
4. An aggressive sales and merchandising program is maintained.
5. Many expenses are fixed so that total per unit handling costs decrease sharply as volume increases.
6. Increased sales of this line have little value for increasing sales of other lines handled.

Please turn to CARD 14.

60. Will you please give me an interpretation of the status of this business as represented on these financial sheets?
61. What additional information do you need to take full advantage of these statements?

62. How precise are these financial statements?

63. What do you feel are the main purposes of financial statements?

Please turn to CARD 15.

64. What is the best way to use financial statements in evaluating your business?

Computing certain ratios and

a. comparing with industry ratios..............................................1
b. comparing with last year's ratios...........................................2
c. comparing with your own goals.............................................3

65. Persons conducting management training sessions often list certain functions of management. What do you consider to be the major functions of management?
In the next series of questions we would like to talk about some of your management activities. There are no right or wrong answers. We are interested only in the way you actually perform your job.

66. In making a major decision, what steps or processes do you go through?

Please turn to CARD 16.

67. In making a major decision, which of the statements on CARD 16 best describes the methods you use in evaluating alternatives?

a. rely solely on managerial judgment in making most decisions
b. work out potential profits (expected sales and expenses) but do not have detailed records which can be used as a base
c. work out potential profits (expected sales and expenses) from records mentally
d. work out potential profits (expected sales and expenses) from records on paper

68. Once a major decision to make a change has been made, what are some of the things you would do to insure that the implementation of this decision will be successful? Include planning for change, and planning for the period after the change has been made.

69. How will you determine whether the change is successful?

70. Do you use long range planning in your business?
71. IF YES TO QUESTION 70:

Please turn to CARD 17.

What type of long range planning do you use?

a. plans for the next year
b. tentative long-run plans
c. definite long-run plans

72. Have you given any consideration to probable future sales trends in your trade area?

NO
YES

73. IF YES TO QUESTION 72:

Please turn to CARD 18.

Which of the statements on CARD 18 best describes the methods you used?

a. made projections on the basis of personal judgment based on day-to-day knowledge of business potential
b. worked out potential sales on paper or mentally by using some of the available sales records in my business
c. worked out mentally the potential sales using business records and other available data
d. worked out on paper the potential sales using business records and other available data

74. Are you grooming someone who could fill a manager's role in the not-too-distant future?

NO
YES

75. What are the major factors you take into consideration in deciding (or in making recommendations to your board) to add or to drop existing lines of business or reorganizing your business to place greater emphasis on a given line?
76. Within the lines, how do you determine what brands and qualities of merchandise to handle?

77. We are interested in knowing about your specific policies or criteria concerning replacement and repair of facilities and equipment. For example, let's take a truck that you use for farm deliveries. What factors do you take into consideration in determining how long to keep the truck, in other words, when to replace it?

78. Does your cooperative have a written organization chart?

79. What factors do you take into consideration in making decisions concerning how your business is organized into departments and functions. (Include decisions such as those concerning functions to be performed and departments to have.)

80. How is information in your business communicated from you to your employees?

81. Do you seek any specialized outside help in the operation of this business to help you and the board make decisions and carry them out?
82. *[IF YES TO QUESTION 81]:
   What type of specialized help do you use?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

83. What methods do you use to determine the number and qualifications of the employees needed in your business firm?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

84. How do you determine the responsibilities and work loads of each of your employees?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

85. What method or methods do you use in your business for appraising the performance of employees in the jobs to which they are assigned?
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

86. Do you periodically review or evaluate the responsibilities and work load of each of your employees?
   NO.............1
   YES.............2

87. *[IF YES TO QUESTION 86]:
   How often?
   ____________________________________________________________
88. Describe briefly the procedure you use in doing this:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

89. What methods are used to train and develop your employees?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Please explain each of these:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

90. What techniques do you include to get top performance out of your employees?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Please turn to CARD 19.

The following questions apply to your relationship with your employees. For the questions on this card, please indicate the situation which best corresponds to the way your business is run.

91. How closely do you associate with your employees on the job?
   a. I deliberately keep my distance.................................................1
   b. I interact with them only when necessary to get the job done............2
   c. I interact with them fairly often on an impersonal basis....................3
   d. I interact with them often on a personal basis.............................4

92. What is the extent to which your employees can influence the goals, methods and activities of their jobs? How much influence do they have?
   a. no influence................................................................................1
   b. little influence............................................................................2
   c. moderate influence.....................................................................3
   d. a great deal of influence.............................................................4
93. In what manner are decisions made that involve the daily operation of the business?
   a. the manager makes the decisions...........................................1
   b. the manager sets the policy, but some decisions are made by employees within a set framework............................2
   c. the manager sets the broad policy, but many specific decisions are made by employees........................................3
   d. employees participate in making many decisions.........................4

94. In what manner are the performance goals for employees set and the orders given?
   a. the manager sets the goals......................................................1
   b. the manager gives the orders; employees are sometimes given the opportunity to comment..............................................2
   c. the manager sets the goals after discussion with subordinates........3
   d. goals are usually established by group participation....................4

95. Does this business have an incentive plan for its employees?
   NO..................1
   YES.................2

96. *IF YES TO QUESTION 95*:

   For which employees do you have a plan? Please indicate their positions and the type of plan.

   Employee | Position | Type of plan
   1.__________ | __________ | __________
   2.__________ | __________ | __________
   3.__________ | __________ | __________
   4.__________ | __________ | __________
   5.__________ | __________ | __________

97. How many of your employees are directly responsible to more than one person?
   ___________________________________________

98. Do you involve other employees in the formulation of your inventory control system?
   NO.............1
   YES............2
99. *[IF YES TO QUESTION 98]:*

Please indicate which employees, by position.


Please turn to CARD 20.

100. What type of job descriptions do you have for each employee position in your business?

   a. do not write job descriptions.................................1
   b. have verbal job descriptions for all employees.............2
   c. have written job descriptions for supervisory employees only........3
   d. have written job descriptions for all employees...............4

101. Please turn to CARD 21. How frequently do you work alongside your employees?

   a. never.................................................................4
   b. rarely..............................................................3
   c. occasionally......................................................2
   d. frequently........................................................1

102. Please estimate the number of hours per week that are devoted to working alongside your employees.

        hrs.

And again on CARD 21.

103. How frequently do you help employees with important tasks to make sure they're done well?

   a. never.................................................................4
   b. rarely..............................................................3
   c. occasionally......................................................2
   d. frequently........................................................1

104. Please estimate the number of hours per week you spend working alongside your employees to be sure the tasks are done well.

        hrs.
Please turn to CARD 22.

105. It is probably true that customers often come to your business for technical advice about products that you handle in your major product lines. Which of the following best describes the adequacy of your business in answering all their questions?

   a. completely adequate ........................................ 4
   b. fairly adequate ............................................... 3
   c. less than adequate ........................................... 2
   d. very inadequate ............................................... 1

106. Most businesses attempt to create a favorable image with their customers. What are the essential features or ingredients in the image you are trying to create for this business?

   
   
   

107. What do you feel is the most important factor in keeping the loyalty of your patron members?

   
   
   

Please turn to CARD 23.

108. Which one of these statements best describes the way you feel about key employee relationships with patron members?

   a. they have a responsibility to keep themselves well informed and make recommendations on all our major product lines ......................... 4
   b. they have a responsibility to pass on only that information about our major product lines which is requested by the customer .................. 3
   c. they should be extremely cautious in making recommendations about any major product line since a poor recommendation could result in a loss of customers ........................................ 2
   d. they should provide the products requested by customers, but should make no recommendations about their uses .......................... 1

109. How do you determine the prices on the goods and services that you sell?

   
   
   

Please turn to CARD 24.

110. Do you have a sales plan or projection for the next operating year?
   a. have one written down..............................................3
   b. carry one around mentally.......................................2
   c. none.................................................................1

111. Do any persons in your business other than your truck driver make regular on-the-farm calls for sales purposes?
   NO............1
   YES............2

112. *IF YES TO QUESTION 111*:
   How many other individuals?____________________

113. Selling is a matter of getting your ideas and product information to purchasers. What factors do you take into consideration in getting this job done?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   *IF respondent did not mention classifying customers in 113, ask:*

114. As you think of merchandising your products, do you classify your farmer customers into different groups and use different selling approaches on them?
   NO............1
   YES............2

115. *IF YES TO QUESTION 114 or mention in 113*:
   You mentioned classifying. What are the major factors you take into consideration in classifying them?
   1.________________________________________________________
   2.________________________________________________________
   3.________________________________________________________
   4.________________________________________________________
   5.________________________________________________________
116. How do you decide how much money to spend on advertising?

117. How do you determine which merchandising services to offer? (Such as soil testing, fertilizer spreading, agricultural chemicals application)

Please turn to CARD 25.

118. Think of the total number of your fertilizer customers. For what percent of these fertilizer customers do you do each of the following:

- a. plan and carry out a complete fertilizer program. __ __ %
- b. plan and carry out a majority of the aspects of a complete fertilizer program. __ __ %
- c. plan and carry out some of the aspects of a complete fertilizer program. __ __ %
- d. make recommendations and give advice only when requested. __ __ %
- e. just sell them fertilizer. __ __ 100%

119. [IF ANY IN A, B, OR C IN QUESTION 118]:

In your mind, what is a complete fertilizer program?

120. On what basis do you select your wholesale sources and outlets?
121. Have you ever used the field representatives of wholesale companies to assist you in this business? Include such things as: financial assistance, technical information, rental equipment, resale help, pamphlets and bulletins, financing on credit for customers, pricing policy, etc.

NO.........1
YES.........2

122. *IF YES TO QUESTION 121*:

In what way(s) were they of assistance to you?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

123. When purchasing supplies for resale, what factors (other than price and quantity) do you consider?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

124. What factors do you consider in deciding the kinds and amounts of products and supplies to keep in inventory?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

125. How do you protect yourself against market price changes on products and supplies in inventory?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

126. Do you have a system of keeping track of inventory levels and changes in these levels?

NO.........1
YES.........2
127. *IF YES TO QUESTION 126*: What type of system?

Please turn to CARD 26.

128. Here is a list of sources which many managers use to finance the inventories in their businesses. Would you please estimate the percent of your inventories that are financed each way?

- [ ] liability capital
- [ ] trade accounts payable
- [ ] notes payable
- [ ] short term bank loans
- [ ] commodity loans
- [ ] Other: Specify

100%

129. Do you determine the amount of credit to be granted to each customer?

NO...........1
YES...........2

130. *IF YES TO QUESTION 129*: How do you determine this?
131. How do you communicate the limits on the amount and time of credit repayment to your customers?

132. Has your co-op put its credit policy in writing?

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Please turn to CARD 27.

133. Which of these categories best describes your situation with regard to borrowing capital to finance open accounts?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>would not borrow</td>
</tr>
<tr>
<td>b.</td>
<td>have never needed to borrow</td>
</tr>
<tr>
<td>c.</td>
<td>do borrow from banks</td>
</tr>
</tbody>
</table>

Please turn to CARD 28.

134. From these categories, what methods do you use to finance notes and contracts?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>do not use notes or contracts</td>
</tr>
<tr>
<td>b.</td>
<td>finance with own capital</td>
</tr>
<tr>
<td>c.</td>
<td>finance through banks and wholesalers</td>
</tr>
<tr>
<td>d.</td>
<td>finance notes and contracts with own capital as well as through banks and wholesalers</td>
</tr>
</tbody>
</table>

135. What do you take into consideration in determining if you are going to need to borrow money and the amount you need to borrow for the investments considered?

136. Do you prepare a budget for your next operating year?

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
137. ☑ IF YES TO QUESTION 136:

What types of budgets do you use and how are they employed?

<table>
<thead>
<tr>
<th>Budget</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

138. Do you compare actual results to your budget?

NO. ............1
YES. ............2

139. ☑ IF YES TO QUESTION 138:

How often do you make this comparison?

Interviewer: Do not give alternatives to respondent. Encircle appropriate answer.

<table>
<thead>
<tr>
<th>Times per month</th>
<th>Times per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>6 4 3 2 1 0</td>
</tr>
</tbody>
</table>
140. What kinds of ratios do you use to determine how efficient you are in your business? What should these ratios be for your business? What are the factors you take into consideration in deciding on what these ratios should be?

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Ratio should be</th>
<th>Factors considered in determining</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

141. How often do you or your bookkeeper prepare a complete operating statement including profit and loss and balance sheet?

[Interviewer: Do not give alternatives to respondent. Encircle or specify appropriate answer.]

Times per year
12 6 4 3 2 1 0 Other: (Specify)

142. Do you use monthly financial statements to help you perform your managerial tasks?

NO.............1
YES.............2

143. [If YES to Question 142]:

In what way do you use them?

---------------------------------------------------------------------
<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Please turn to CARD 29.

We would now like to talk with you about your satisfaction with various aspects of your position. For each aspect of your job that I read to you, indicate whether you are Satisfied or Dissatisfied. Then indicate how strongly satisfied or dissatisfied you are by giving me a number from 1 to 5. Number 5 indicates a very great degree of satisfaction or dissatisfaction while number 1 indicates very slight amounts of satisfaction or dissatisfaction.

*Interviewer: In each case encircle the appropriate code. Be sure there are two circles for each item.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Slight</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>144.</td>
<td>How satisfied are you with the authority you have been given by your board of directors to do your job?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>145.</td>
<td>How satisfied are you with your present position when you compare it to similar managerial positions in the state?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>146.</td>
<td>How satisfied are you with the progress that you are making toward the goals which you set for yourself in your present position?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>147.</td>
<td>How satisfied are you that the people of your community give proper recognition to your work as a manager of a cooperative?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>148.</td>
<td>How satisfied are you with your present salary?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>149.</td>
<td>How satisfied are you with the amount of time which you must devote to your job?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>150.</td>
<td>How satisfied are you with the amount of interest shown by the community in its cooperative?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>151.</td>
<td>How satisfied are you with your present job when you consider the expectations you had when you took the job?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>152.</td>
<td>How satisfied are you with the work that you do as the manager of a cooperative?</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
153. How satisfied are you with the level of challenge and responsibility you are faced with in your present position?

154. How satisfied are you with the amount of authority you are given for the tasks you are expected to perform?

Please turn to CARD 30.

155. Using the categories on this card, to what extent do you feel being a manager provides you with the opportunity to do things which give you great personal satisfaction?

The managerial position gives you:

a. no opportunity...........................................................................1
b. a little opportunity......................................................................2
c. some opportunity........................................................................3
d. much opportunity........................................................................4
e. a great deal of opportunity............................................................5

Please turn to CARD 31.

156. How much time do you spend doing things you dislike as a manager?

a. no time....................................................................................1
b. little time..................................................................................2
c. some time...................................................................................3
d. much time..................................................................................4
e. most time....................................................................................5

Please turn to CARD 32.

157. How many things about the job as manager do you dislike?

a. nothing....................................................................................1
b. a few things...............................................................................2
c. some things..............................................................................3
d. many things..............................................................................4
e. most things................................................................................5

Please turn to CARD 33.
158. How important is it to you to have a job where you do not have to do things which you dislike?

a. of no importance ............................................................. 1
b. of little importance ......................................................... 2
c. of some importance .......................................................... 3
d. of considerable importance ............................................... 4
e. a great deal of importance .................................................. 5

Please turn to CARD 34.

159. If you "had it to do over again" would you take the position of manager of this cooperative?

a. certainly would ............................................................ 1
b. probably would ............................................................. 2
c. undecided ................................................................. 3
d. probably would not ...................................................... 4
e. certainly would not .......................................................... 5

One of the most significant processes in the operation of a cooperative is the decision-making process performed by the board of directors and the manager. We would like to find out a little about this process as it occurs in this business.

Please turn to CARD 35.

I will read to you a series of decisions which must be made in the operation of a business. Please indicate which of the categories on CARD 35 best describes who actually makes the final decision in this business.

* Interviewer: These are the categories the respondent will use. Repeat the content (not the letter) of each answer to be sure you have it correct.

Categories: a. Manager alone
b. Manager, after checking with key board members
c. Manager, with formal approval of board
d. Joint decision of manager and board
e. Board, with manager's advice or recommendation
f. Board alone
g. Membership vote at annual or special meeting

Who makes the decision on:

160. Whether or not to add or drop a product line?

Code: [Encircle one]

a. b. c. d. e. f. g.

161. Establishing or setting the policy for equipment repair or replacement?

a. b. c. d. e. f. g.
162. The firing of employees other than the manager and assistant manager?
   a. b. c. d. e. f. g.

163. Setting policy which determines the methods of financing to be used in the business?
   a. b. c. d. e. f. g.

164. Evaluating, modifying, adding to or eliminating existing job descriptions of any employees other than the manager and assistant manager?
   a. b. c. d. e. f. g.

165. Incurring short-term credit under 10% of current liabilities?
   a. b. c. d. e. f.

166. Incurring long-term debt in excess of 5% of long-term liabilities?
   a. b. c. d. e. f.

167. Whether or not to replace a major piece of equipment?
   a. b. c. d. e. f.

168. The hiring of a new employee for an existing position other than the manager?
   a. b. c. d. e. f.

169. Whether or not to hire an additional employee for the business?
   a. b. c. d. e. f.

I will read this list of decisions again. In the previous list we asked who actually made the decision. Now we would like to ask who, in your opinion, should make these decisions. Use the same set of categories.

Categories: a. Manager alone
          b. Manager, after checking with key board members
          c. Manager, with formal approval of board
          d. Joint decision of manager and board
          e. Board, with manager's advice or recommendation
          f. Board alone
          g. Membership vote at annual or special meeting
Who should make the decision concerning:

170. Whether or not to add or drop a product line?

   Code  Encircle one
   a.  b.  c.  d.  e.  f.

171. Establishing or setting the policy for equipment repair and replacement?

   a.  b.  c.  d.  e.  f.

172. The firing of employees other than the manager and assistant manager?

   a.  b.  c.  d.  e.  f.

173. Setting policy which determines the methods of financing to be used in the business?

   a.  b.  c.  d.  e.  f.

174. Evaluating, modifying, adding to or eliminating existing job descriptions of any employees other than the manager and assistant manager?

   a.  b.  c.  d.  e.  f.

175. Incurring short-term debt under 10% of current liabilities?

   a.  b.  c.  d.  e.  f.

176. Incurring long-term debt in excess of 5% of long-term liabilities?

   a.  b.  c.  d.  e.  f.

177. Whether or not to replace a major piece of equipment?

   a.  b.  c.  d.  e.  f.

178. The hiring of a new employee for an existing position other than the manager?

   a.  b.  c.  d.  e.  f.

179. Whether or not to hire an additional employee for the business?

   a.  b.  c.  d.  e.  f.
Please turn to CARD 36.

180. From the categories indicated on CARD 36, please indicate how you would describe the working relationship between yourself and the board of directors. First, simply indicate if the working relationship is essentially harmonious or if some dissention exists. Then choose one of the five numbers to indicate how much harmony or dissention exists.

<table>
<thead>
<tr>
<th>Little</th>
<th>Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Please turn to CARD 37.

181. From the range described on this card, what in your opinion does the board of directors think of you as a person? Select a number from one to eleven which indicates your feelings.

1 2 3 4 5 6 7 8 9 10 11

| Dislike him very much | Like him very much |

Please turn to CARD 38.

182. How concerned are you that the board has a favorable opinion of you as a person? Select a number from one to eleven which indicates your feelings.

1 2 3 4 5 6 7 8 9 10 11

| Not concerned at all | Very much concerned |

Please turn to CARD 39.

183. In your opinion, how does the board of directors rate your professional competency? Select a number from one to eleven which indicates how you think the board rates your professional competency.

1 2 3 4 5 6 7 8 9 10 11

| Incompetent | Exceptionally Competent |

Please turn to CARD 40.

I will now read to you a series of statements about the relationship between yourself and the board of directors. I wish to emphasize that your reactions will be kept strictly confidential and will not be shown to any individuals outside the research team. Nor will they be identified with either you or this cooperative specifically. It is extremely important in this type of research that we obtain answers that most completely represent your feelings.
After I read each statement, using the categories on CARD 40 please indicate whether you agree with the statement or disagree with it. Then indicate a number which best describes how strongly you feel about the statement.

[*Interviewer: Encircle the appropriate code. If the respondent refuses to answer or will not give an opinion, encircle both "A" and "D"][/]

<table>
<thead>
<tr>
<th>statement</th>
<th>slight</th>
<th>strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>184. My board of directors puts too many restrictions on me as the manager.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>185. The board usually gives me sufficient freedom to do my job well.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>186. I wish my board would move more quickly in making decisions so this business could keep up-to-date.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>187. The board of directors makes some decisions that I should make.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>188. The board for this co-op does not take the initiative in the areas where they have the responsibility.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>189. My board of directors really lets me run this business as I want to.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>190. My board of directors is actually quite competent.</td>
<td>A 1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Please turn to CARD 41.

Many management textbooks list five separate functions of management, one or more of which is being performed by the manager at all times. We are interested in how you spend your time among these five functions. Each one of the functions is performed at all levels within the business. For example, planning must include overall planning for the whole business as well as planning for each area such as inventory and sales.
Think of all the time you spend that is directly connected with the operation of the cooperative. Using this as the 100% total, what percent of your time is spent in each of the five functions as described on the card? Read through all five functions first, then indicate the percent of your time spent in each area. We recognize that this may be a difficult task but please give us your best estimates of these time divisions.

1. PLANNING—By planning we mean all time spent preparing for and making decisions concerning all future actions of the cooperative, both immediate and long-run. This includes all appraisals of future situations and needs; the accumulation and preparation of necessary information and data; thinking, reflection, and reading as well as consultations and conferences with persons relative to planning; and the drawing up of new procedures and methods for performance of these plans.

2. ORGANIZING—By organizing we mean all time spent in grouping jobs on processes, assets, and personnel and in establishing relations among them so the purposes of the cooperative are effectively carried out. This includes time preparing, writing, and revising job descriptions, selection and hiring of personnel, setting up organizational charts and relationships.

3. DIRECTING—By directing we mean all time spent in the training, evaluation, motivation or disciplining of employees. This includes any interpretation or clarification of policies or directives and anything you do to affect the morale, loyalty, or harmonious cooperation of the employees.

4. COORDINATING—By coordinating we mean all time spent in activity designed to insure the effective operation of the cooperative in terms of integration, timing, and balance. This includes all time spent communicating and insuring that effective communication is taking place between all people and departments in the cooperative.

5. CONTROLLING—By controlling we mean all time spent insuring the successful performance of all operations, processes and jobs. This includes the evaluation of reports, data, plans, departments, performance, as well as the entire operation in relation to the goals, policies, and standards of the cooperative.

100%
192. In general, how do you feel these functions of management are related to one another? Would you rate them as relatively independent or relatively integrated? By independent we mean that at one time you can sit down and plan awhile, then later organize for awhile, etc. By integrated we mean that generally the things you do include more than one of these functions at the same time. How integrated or independent do you see these functions? Select a number which best indicates your feelings.

1 2 3 4 5 6 7 8 9 10 11

Very independent - Highly integrated

Please turn to CARD 43.

193. Time spent by a manager can be broken down another way. We would now like to break it down by areas of activity rather than general functions. All of the five functions of management listed above can be performed in each area of this breakdown. We would like to have you estimate the amount of time you spend in each of these categories.

Again think of all the time you spend that is directly connected with the operation of the cooperative. Using this as the 100% total, estimate the percent of your time that is spent in each area.

We would suggest that you read through all the categories first. Then select three or four where you spend a major portion of your time (say 45 percent) and indicate how much time you spend in this whole area. Next, indicate the percent you spend in each of the three or four areas making up the larger area.

Then take several more categories where you spend quite a bit of time and repeat the steps above. The estimations may be easier to make by grouping categories into larger areas.

___% 1. OVERALL MANAGEMENT--By overall management we mean all time spent informing, consulting with, listening and making suggestions to the Board of Directors, as a group and individually, on all matters pertaining to the functioning of the business. This includes determining long-run objectives for the business.

___% 2. EMPLOYEE MANAGEMENT--By employee management we mean all time spent in determining the number and qualifications of employees needed, selecting new employees, training and developing employees. This includes all time spent in acts which are designed to directly affect the morale, productivity, loyalty, and cooperation of employees.

___% 3. CUSTOMER RELATIONS MANAGEMENT--By customer relations management we mean all time spent attempting to create a favorable attitude toward the business in the minds of customers. This includes insuring good appearance of plant, facilities, and employees, insuring good and honest service, and any other activity specifically designed to improve the image of the business in the eyes of customers.
% 4. RETAIL MANAGEMENT--By retail management we mean all time spent in activities directly concerned with retail pricing, direct retail selling and purchasing, advertising, and supplemental methods of increasing volume. This includes determining the elasticity of the various supplies and demands, insuring the functioning of an effective sales and promotional operation and setting up and guaranteeing the completion of any special projects such as demonstration plots, contests, handouts, etc.

% 5. WHOLESALE MANAGEMENT--By wholesale management we mean all time spent selecting and dealing with wholesale dealers. This includes planning the timing and quantity of the transaction, determining the terms of the transaction, insuring adequate transportation for the products, evaluating the service rendered by each dealer, and any other acts directly affecting the wholesale operation of the business.

% 6. INVENTORY MANAGEMENT--By inventory management we mean all time spent attempting to achieve the lowest possible total cost of maintaining the level of inventories most profitable for the business. This includes the determination of the most profitable levels; maintaining adequate control; insuring that costs due to inefficient handling, losses due to shrinkage, and market changes are minimized; and controlling all other factors relating to the management of inventories.

% 7. CUSTOM SERVICE MANAGEMENT--By custom service management we mean all time spent determining what services to offer, prices to be charged, and promotional activities to use. This includes all activities in the managing of custom services such as evaluation of the services offered, administering their efficient production, evaluating the complimentarity of each service to the products handled, and so on.

% 8. RETAIL CREDIT MANAGEMENT--By retail credit management we mean all time spent determining the most profitable overall level of retail credit for the business, setting up credit programs for customers, determining the most profitable price differential between credit and cash sales, and supervising accounts receivable. This includes time spent planning and administering procedures for collecting accounts receivable, financing accounts receivable, and any other management activity affecting the handling of retail credit.

% 9. HELPING ON SPECIFIC OPERATION--By helping on specific operations we mean all time spent directly helping employees in the performance of their jobs. This includes such things as helping to unload a truck, running the mixer or grinder, taking soil samples, working on the records, waiting on customers, etc.

% 10. PUBLIC RELATIONS--By public relations we mean all time spent informing persons in the community about the services your cooperative offers, its programs, and special features. Also include any time taken to learn of public feelings toward the cooperative and time spent creating a favorable public image. (Note: Be sure to distinguish between this and customer relations management.)
111. MISCELLANEOUS—By miscellaneous we mean all time spent in activities which cannot be classified into one of the above areas.

100%

Please turn to CARD 44.

194. In general, how do you feel these departmental functions of management are related to each other? Would you rate them as relatively independent or relatively integrated? By independent we mean that at one time you can work at sales and advertising, then later work on inventory, etc. By integrated we mean that generally the things you do include more than one of these functions at the same time. How integrated or independent do you see these functions? Select a number which best indicates your feelings.

1 2 3 4 5 6 7 8 9 10 11
Very independent

Highly integrated

Now I would like to close this interview with some information about you and your general business operations. Again, this information will be kept in complete confidence and will never be identified with your name. We use this information as a means of classification of the data in the rest of the schedule.

195. What is your age?

196. How many years of formal education have you completed?

*Encircle appropriate number.*

8 or less 9 10 11 12 13 14 15 16 17 18 19 20

Elementary High School College Beyond BA or BS

197. *If attended high school* Did you take vocational agriculture in high school?

NO. ..........1
YES. ..........2

198. *IF YES TO QUESTION 197:*

How many years of vocational agriculture did you take?

199. *If attended college* What was your college major?


200. Prior to or during your 1st years of management, did you attend any management training schools, workshops, or take any business courses in school?

NO. ............... 1
YES. ............... 2

201. *IF YES TO QUESTION 200*:

How many and what were they?

________________________________________________________________________

202. Have you ever lived on or worked on a farm?

NO. ............... 1
YES. ............... 2

203. *IF YES TO QUESTION 202*:

In what capacity and for how long?

________________________________________________________________________

204. Have you had any specialized training in any of your major product lines or in management itself, during the past 2 years? (Specialized training includes workshops, short courses, training schools, refresher courses, conferences, etc.)

NO. ............... 1
YES. ............... 2

205. *IF YES TO QUESTION 204*:

Using 8 hour day equivalents, how many days training have you received on each of your product lines during the last 2 years?

<table>
<thead>
<tr>
<th>Line</th>
<th>Yes</th>
<th>No</th>
<th>Amount of Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feed</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertilizer</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumber</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petroleum</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
206. Have your department heads or key employees had any of this training?

   NO. .............. 1
   YES............... 2

207. *IF YES TO QUESTION 206:*

Using 8 hour day equivalents, how many days training have they received during the last 2 years?

<table>
<thead>
<tr>
<th>Line</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Feed</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lumber</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Machinery</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Management</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Petroleum</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Seed</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Amount of Training

208. How long have you been the manager of this business?

__________________________ Years

209. How long have you had full responsibility for the management of a business?

__________________________ Years

210. What have been your past four (4) jobs and how long did you spend in each position?

<table>
<thead>
<tr>
<th>Position</th>
<th>Length of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>most recent 1.</td>
<td>___________________</td>
</tr>
<tr>
<td>2.</td>
<td>___________________</td>
</tr>
<tr>
<td>3.</td>
<td>___________________</td>
</tr>
</tbody>
</table>

least recent 4. | ___________________

211. Do you own, operate, or manage a farm at the present time?

a. own .................................................................................. 1
b. operate ............................................................................. 2
c. manage .............................................................................. 3
d. none of the above .......................................................... 4

212. In addition to yourself, how many people do you employ at the present time?

__________________________
213. How many new people have you hired in the past year as replacements for employees who are no longer employed here?

214. How many people have you hired in the past year to fill new positions created by the expansion of this business?

215. How many brothers and sisters do you have?

Older brothers       Younger brothers       Older sisters       Younger sisters

216. Where did you spend the most time during your early life (prior to age 21)?

   a. farm.................................................................1
   b. town of less than 2,000........................................2
   c. town of 2,000 or more but less than 10,000..................3
   d. city of 10,000 to 100,000......................................4
   e. city larger than 100,000......................................5

THANK YOU VERY MUCH FOR YOUR TIME AND COOPERATION
CONFIDENTIAL

CONFIDENTIAL

CONFIDENTIAL

IOWA STATE UNIVERSITY
RESEARCH PROJECT 1626
Ames, Iowa

All the information in this schedule will be kept in complete confidence. You will never be identified with any of the information which we provide us.
SECTION 1

Instructions

People differ in the ways they think about themselves and about those with whom they work. This may be important in working with others. Please give your immediate, first reaction to the items on the following pages.

On each sheet are pairs of words which are opposite in meaning, such as Talkative and Quiet. You are asked to describe yourself and two of the people with whom you have worked by circling one of the eleven numbers between the two words.

Each number represents a point on the line defined by the two adjectives in your description of the person. For example, if the employee you are describing is or was extremely talkative, you would circle the number five (5) closest to talkative. Each number toward Quiet represents lesser degrees of talkativeness.

Look at the words at both ends of the line before you circle a number. Please remember that there are no right or wrong answers. Work rapidly; your first answer is likely to be the best. Please do not omit any items and mark each item only once.
First describe yourself as you ordinarily think about yourself. Circle one number between each pair of words.

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Interesting
Harmonious
Hesitant
Inefficient
Cheerful
Guarded
Other people generally form opinions of us, correct or incorrect. On this sheet, please describe yourself as you think you generally appear to others.

Remember, this is not what you really are but what other people think you are.

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Think of the employee with whom you can work best. He may be someone you work with now, or he may be someone you worked with in the past.

He does not have to be the person you like best, but should be the employee with whom you could best get a job done. Describe this man as he appears to you.

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Section 1, Page 4
There are always some people with whom we can work better than with others.

Think of the employee with whom you can work least well. He may be someone you work with now, or he may be someone you worked with in the past.

He should be the employee with whom you would have the most difficulty getting a job done.

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SECTION 2

Instructions

On the following twelve pages are a number of statements about business management. We are interested in your feelings or opinion about each statement. You will probably agree with some of these statements. That is, some statements will express your own opinions or feelings about managing. Other statements will express feelings opposite to yours.

After you have read each statement, please circle the "A" (agree) if you agree with the statement or the "D" (disagree) if you disagree with the statement. Once you have made this decision, please indicate how strongly you agree or disagree with the statements by circling one of the numbers which appears to the right of each statement. If it really doesn't make much difference to you if you agree or disagree with the statement, circle 1. If you very strongly agree or disagree with the statement, circle 5. For some statements, the numbers 2, 3 or 4 may better describe how strongly you agree or disagree with the statement. When this is the case, circle the appropriate number.

For example, consider the statement: All men are created equal. A 1 2 3 4 5 D

Do you agree or disagree with this statement? Circle "A" ("D"). How strongly do you agree (disagree) with this statement? Circle the appropriate number.

Please be sure to circle both a letter and a number after each statement, unless you are completely undecided whether you agree or disagree with the statement. In that case, circle both "A" and "D", but do not circle any of the numbers. This response indicates that you neither agree nor disagree with the statement.

These statements are in no way designed to be a test. There are no right or wrong answers to the statements. The answers which will be most helpful to this research project are the ones which best reflect your own feelings about each of the statements.
1. It is better to make a smaller profit each year than to attempt something where there is some chance of losing.

2. Economic forces in man are stronger than moral forces.

3. So many products are coming out these days that it is impossible for the dealer to keep himself informed with respect to the lines he handles.

4. One of the most important things a manager can do is attend a training program where new ideas might be presented.

5. Actually you can rely on very few people.

6. For most decisions it's a good idea to get the advice from the board, but then go ahead and make your own decisions.

7. The influence a manager exerts really decides the financial outcome of a cooperative.

8. The nature of farm related businesses is such that uncontrollable circumstances are very important in determining the success of the business.

9. There is so much personal satisfaction in being a manager that income becomes relatively unimportant.

10. I regard myself as the kind of person who is willing to take a few more risks than the average manager.

11. The probabilities of success can be better estimated for a specialized business than for a diversified business.

12. It is natural for men to want to expend physical and mental energy in work.

13. It is more important to maximize profit in the business firm than it is to offer most of the services desired by customers.
14. Customers must be served even if it means a slight loss of income.

15. A co-op manager should ask himself how profitable each alternative is when deciding how to spend his time.

16. Most managers can improve their income through harder work instead of blaming the circumstances.

17. The important things in life can only be attained if a person has made a good income.

18. Many managers spend too much time and effort trying to keep themselves up-to-date on new things in business management.

19. Having many friends is more important than being a financial success.

20. Most managers can improve their income through better management instead of blaming the circumstances.

21. A manager's most important asset is a "strong back".

22. In this day and age a person can no longer afford to be independent and to rely on his own judgment in making decisions.

23. A manager should try to reduce the risk in his business by keeping his operation diversified, even though it may mean the loss of some future income.

24. Many of the new business practices a manager hears of are backed by good research and usually applicable to the business.

25. Managers who are willing to take more than average chances usually do better financially.
26. I admire the manager who can get a job done most efficiently due to effective planning.

27. If I feel that the odds are greater than 60-40 against an alternative course of action paying off, I look for other choices.

28. The average human dislikes work and will avoid it if he can.

29. Most dealers spend too much time and effort in keeping themselves up-to-date on new merchandising practices.

30. A manager's most important asset is his ability to think ahead.

31. People at all levels in local cooperatives possess the capacity to exercise imagination, ingenuity, and creativity in the solution of problems.

32. The world is simply too complex for a man to be completely independent.

33. The manager who gets ahead fastest is the one who sticks to the old proven ways of doing things.

34. At times it is best for a manager to choose an alternative about which the outcomes are completely uncertain in making a decision.

35. If I had a choice I would rather work with my hands than read a book.

36. The only real goal in managing is to maximize business profits.

37. My success is partly due to the fact that I can play the odds well.

38. I really respect an individual who makes his own decisions and is willing to stand behind them.
39. One of parents' greatest obligations is to teach their children to make decisions on their own uninfluenced by what others may say or do.

40. A manager must be willing to take a great number of risks to get ahead.

41. If a man is going to hire labor he should be willing to work right along side the man he's hired.

42. Human beings hardly ever learn to avoid making the same mistakes twice.

43. Inventory losses can be effectively hedged against.

44. It's difficult for children to get a good start in life unless you can provide them with economic assistance.

45. Attending a short course where new ideas might be presented is usually a waste of time.

46. Quite a few managers would be better off if they would spend less time going to meetings and more time in their business.

47. A parent's first responsibility is to assure the material security of his children.

48. Many managers spend too much time trying to think through alternate ways of doing a job rather than going ahead and doing the job the way they already know.

49. An employee is really more interested in his salary than the way a manager handles his suggestions.

50. It's only natural to look up to a man who has made a lot of money.

51. One of the best single indicators of whether or not a man will make a good manager is his ability to make his own decisions.
52. I think the traditional ways are the best ways of doing things.

53. A person should always be master of his own fate.

54. A manager must be willing to take a great number of risks to stay in business.

55. An individual should try to solve his own problems by himself.

56. The most successful manager is the one who makes the most profit for his business.

57. A manager cannot afford to make his decisions independently but should consult with those with whom he works.

58. Managing would be extremely difficult without the advice and help of my board.

59. High prestige should be accorded the manager who has made his business prosperous and thriving.

60. I feel the manager who has proven his financial ability should be given a strong voice in his community.

61. Families with modest incomes are happier than those who have lots of money.

62. Many managers should spend more time analyzing their records for operational efficiency and less time actually assisting in the keeping of business records.

63. For the most part an individual should "go it alone" and make his own decisions.

64. if you want to increase worker efficiency you have to apply more pressure.
65. I have a great deal of respect for the man who has made a lot of money.

66. It is better to live on an average income and enjoy life rather than spending all your time trying to maximize your income.

67. The manager's most important objective should be to make the business profitable.

68. A manager's willingness to spend some time assisting with day to day operations, such as with the grinding operation, is more important in a successful business than all the new ideas he reads or hears about.

69. The slack seasons in farm product handling can be overcome readily by good planning by the manager.

70. Most managers should spend more time reading research publications.

71. The desire for money is destroying the moral fibre of our country.

72. Some new ideas may hurt a business, but I don't let that stand in my way of trying some of the better ones.

73. It is important to take time to consider the alternative ways of doing a job before deciding which one is best.

74. A new manager would do well to find out the opinions of more experienced managers before making decisions.

75. Most workers don't really care whether a job is interesting and challenging.

76. Physical work is more satisfying and rewarding to me than mental activity.
77. A manager should never borrow large sums of money for operating capital.

78. A manager must keep up and apply new methods in business management to be able to compete.

79. Under the right conditions workers will seek and accept responsibility.

80. A co-op manager is in a good position to compete favorably in most any locality.

81. While it is true that a person may become too oriented toward making money, many managers would be better off if they would spend more time trying to make their business pay.

82. Rather than to continually borrow money a manager should work for a definite level of capital accumulation.

83. Most workers today don't work as hard as workers did 10 years ago.

84. The main reason that more managers aren't better off financially is that they aren't willing to make the "hard-nosed" decisions necessary to make the business profitable.

85. Those managers who have made the greatest financial success have been willing to deviate from what the customers considered to be right.

86. The price a person has to pay for financial success is not worth it.

87. Good managers take the time to seek out information and use this information in making decisions.

88. Although more risks are involved, new management practices pay off in the long run.

89. Many new managers get started off on the wrong foot by trying to make all the decisions themselves.
90. One of the most undesirable things about being a manager of a cooperative is that too many decisions are made for you by the board of directors.

91. A man in business for himself should be free to make his own decisions without any outside interference.

92. The variables in a business which are not under direct control of the manager, (such as location, plant facilities, and economic conditions) nearly determine the productivity of the business, regardless of the ability of the manager.

93. Good management is the most important factor in making a business successful.

94. The greatest satisfaction in being a manager comes in running a highly profitable business.

95. In order to stay in business a dealer has to keep learning and trying new things.

96. A manager is better off to continue traditional management practices since many of the new-fangled ideas are not suited to his business operation.

97. A good co-op manager does not have great difficulty overcoming stiff local competition.

98. Most managers are becoming so oriented toward making money, they don't have time to enjoy life.

99. I don't like to feel obligated to other people.

100. A manager's thinking and planning counts for more in business success today than do his regular chores.

101. One of the best ways to get ahead financially is to be independent in your decision making.

102. Good management can eliminate most of the risks involved in any business.
103. Having the freedom to make up my own mind is, to me, one of the major advantages in management.

104. A good co-op manager can make his business successful in spite of a board that places restrictions on him.

105. In general, managers are more important than boards of directors in ultimately influencing the financial outcome of a cooperative.

106. People in our society have become so concerned with conforming to the actions of others that we have lost a part of the independent thinking that made this country great.

107. New ideas in managing are all right but I don’t use very many of them.

108. You can really get farther by talking with and cooperating with people.

109. A man can be more successful by striking out boldly on his own than he can by following the advice of others.

110. Most workers want to be directed and controlled.

111. It is better to stay as a manager of a firm with a lower salary and fewer problems than change to a firm with a higher salary and many problems.

112. A good manager can overcome most marketing problems that he faces.

113. A co-op manager can be successful even if his member-patrons are somewhat unhappy with his business practices.

114. Perhaps the greatest reward in a management position is the opportunity to make your own decisions.

115. Intelligence is more important in management than in most other business activities.
116. Losses due to market change can be effectively hedged against.

117. It is more important to me to be known as a person who gets along well with others and has a lot of friends rather than a person who likes to make decisions for himself.

118. One of the most important things a manager can do is to work out a long-range plan for his business operation.

119. The major reason for going to college is to be able to make a better income.

120. In the long run, a manager is better off to establish a pattern and stick with it rather than to continually change his business operation.

121. One of the major problems in our country today is that people are too concerned with money and the things money will buy.

122. In deciding about making changes in his business, a manager's first consideration should be "is it profitable."

123. I always evaluate a new idea or product for my cooperative and, if it looks good, I try it.

124. Many of the new merchandising ideas that come out these days are not practical for the average dealer.

125. A manager really can't afford to experiment with different ideas in the business.

126. The hours a manager puts in behind the desk are much more important to the success of the business than the hours he puts in operating the scales, helping with the grinding operation or other jobs requiring physical labor.

127. One of the best guides in making decisions is what has worked in the past.

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128. People who have been at least moderately successful financially seem to contribute more to community life than people who have not been as successful financially.

129. Financial success has to be considered to judge a man's standing in his community, but influence should not be the privilege of the wealthy.

130. People who have been successful financially generally are more interesting people with whom to visit.

131. The best way to avoid trouble is to be as independent as possible.

132. Obtaining information on management is a necessary activity for the successful functioning of any manager.

133. Hours spent by a manager evaluating and making future plans for his business are generally more profitable than hours spent helping with the mixing or grinding operations.

134. The chances of preparing children to live good useful lives are pretty slim if you have just enough money to make ends meet.

135. There are so many desirable things in life that a person can afford to get along on a lower income to maintain these advantages.

136. A good manager is the one who can use his head as well as his back.

137. Jobs should contain as much challenge and opportunity as possible.

138. It is more important for the dealer to make decisions on the basis of past personal experience than to try to find out new ways to do things.

139. Time spent in learning about new management practices is time well spent.

140. A manager should always have a contingency fund in case of emergency.
141. Financial success is only one of many ways to judge a man's status in his community.

142. One of the most important things a manager can do is to be sure a good set of records is kept.

143. The man who stands alone is the man who is admired.

144. Thinking, reading, and planning are not really important to me in managing this business.

145. A man must be willing to make his own decisions, uninfluenced by the opinions of others.

146. It is more important for managers to make decisions on the basis of past experience and rules of thumb than to try to find new ways of doing things.

147. The financially successful man is naturally quite influential in his community.

148. There are more important things in life than trying to make a few extra dollars.

149. Managers must be allowed to make all their decisions by themselves.

150. If a man wants a thing done right, he must do it himself.

151. The independent spirit--spurning all aid, needing no one, self-reliant and free--this is man at his best.

152. A good manager can overcome errors made by his employees.

153. A real problem that many farm supply managers have is that they don't think through a set of goals and objectives for their business operation.
154. The best way to solve problems is to dig in and work on them immediately instead of wasting time trying to think of better or easier solutions.

155. In most cases a manager can save time in the long run by first sitting down and figuring the problem out.

156. People must be coerced into working.

157. Man will exercise self-direction and self-control in the service of worthwhile objectives.

158. Before trying any new practice or idea, it is pretty wise to wait and see how it is working out for some of the other businesses.

159. I would rather take more of a chance on making a big profit than to be content with a smaller but less risky profit.

160. It's good for a manager to take risks when he knows his chance of success is fairly high.

161. Though it may be slower, a good manager can be successful by taking only very few risks.
SECTION 3

Instructions

The following set of questions concerns your opinions, attitudes and background. Each question will have one best answer for you. Please place a check in the appropriate space for each question. Be sure to complete all questions.

1. Have you ever held an office in any civic or social organization, club or society?
   a. _____ no
   b. _____ 1 or 2 times
   c. _____ 3 or more times

2. In helping me make decisions during my teens, I received the most valuable experiences from:
   a. _____ friends
   b. _____ my family and home

3. How willing are you to defend (with no support from others who share your views) a position which you feel to be justified?
   a. _____ very willing
   b. _____ more willing than the average person
   c. _____ about average in willingness
   d. _____ not too willing
   e. _____ not at all willing

4. How often do you win arguments with your friends?
   a. _____ never
   b. _____ rarely
   c. _____ sometimes
   d. _____ often
   e. _____ usually
   f. _____ almost always
   g. _____ never have any arguments
Check one best answer.

5. How would you rank yourself as a manager?
   a. ______ in the top 5%
   b. ______ in the upper 20%
   c. ______ in the upper 50%
   d. ______ in the lower 50%
   e. ______ I don't know

6. In connection with your work, in which one of these have you taken most pride?
   a. ______ having been able to avoid any major controversies
   b. ______ having gotten where I am on my own
   c. ______ having provided a lot of new ideas, good or bad
   d. ______ having been able to work smoothly with people
   e. ______ having been able to do well whatever superiors requested of me

7. Which do you feel has been your most outstanding negative experience in your school life?
   a. ______ unpopularity with boys
   b. ______ unpopularity with girls
   c. ______ unpopularity with teachers
   d. ______ lack of close friendships
   e. ______ lack of achievement in sports
   f. ______ lack of achievement in school

8. Do most people give you:
   a. ______ much more respect than you deserve
   b. ______ a little more respect than you deserve
   c. ______ as much respect as you deserve
   d. _____ a little less respect than you deserve
   e. ______ a lot less respect than you deserve

9. How do you want people to feel about you?
   a. ______ feel I am capable
   b. ______ feel I am tough but fair
   c. ______ feel I am a "nice guy"
   d. ______ feel I have a sense of humor
   e. ______ feel I am exceptionally intelligent
   f. ______ none of these
Check one best answer.

10. Which one of the following do you think is closest to describing your personality?
   a. I am difficult to really get to know
   b. I have some really close friends and a number of acquaintances
   c. I am friendly and easy going, have a lot of friends
   d. I am very jolly, the "life of the party" type
   e. I find it extremely difficult to describe myself

11. Which of the following do you enjoy least?
   a. talking with friends
   b. spending time with my family
   c. physical activity
   d. meeting strangers and winning them over
   e. reading

12. Which one of the following have you disliked most in most jobs that you have held?
   a. couldn't plan future around job
   b. couldn't use initiative
   c. no encouragement to put forth effort to better myself
   d. the people above me
   e. none of these

13. On which one of the following features of your job would you like to be able to spend more time?
   a. listening to new ideas
   b. keeping things in their place
   c. passing on detailed information to others
   d. getting to really know the people with whom I work
   e. correcting errors as they are made
   f. thinking about alternatives and making plans

14. In your opinion, at what stage in life do men do their best work?
   a. when they are single
   b. when married, but childless
   c. when married and their families are young
   d. when married and their families are grown
   e. there is probably no difference among the above
Check one best answer.

15. In your opinion, what is the best way to get people to do things?
   a. _____ by driving them
   b. _____ by showing them
   c. _____ by kidding them into going along
   d. _____ by setting an example
   e. _____ some other way

16. Which one of the following has helped you most in getting along with people?
   a. _____ going along with majority opinion
   b. _____ standing up for my rights
   c. _____ giving others a lot of attention
   d. _____ not changing my views if I think I am right, despite pressure
   e. _____ changing my opinion when it is necessary

17. When in high school, about how many evenings a week did you "go out"?
   a. _____ less than 1
   b. _____ 1
   c. _____ 2
   d. _____ 3
   e. _____ 4 or more

18. In comparison with your friends, what do you think of your personal appearance?
   a. _____ almost all of my friends are better looking
   b. _____ most of them are better looking
   c. _____ I am about average in looks
   d. _____ I am better looking than most of them
   e. _____ I don't feel strongly one way or the other about my looks

19. What period of your life do you remember as your happiest?
   a. _____ early childhood
   b. _____ school years
   c. _____ the immediate past
   d. _____ while in the armed forces
   e. _____ now
Check one best answer.

20. How do you feel about the routine paper work of your job?
   a. ______ it is excessive
   b. ______ there is quite a lot, but I can put up with it
   c. ______ there is a lot, and something should be done to reduce it
   d. ______ there is a lot, but most of it is really necessary
   e. ______ I rather enjoy it

21. Which one of the following have you the most opportunity to do in your present job?
   a. ______ use my imagination
   b. ______ exercise administrative ability
   c. ______ do the job as it could be done
   d. ______ relax now and then
   e. ______ exercise my initiative

22. Where do you and your friends most often get together?
   a. ______ at my home
   b. ______ at a friend's home
   c. ______ at a club or lodge (social, fraternal)
   d. ______ at a theater, restaurant, or other public place
   e. ______ none of these

23. Looking back on the days you spent in your family or childhood home, were they:
   a. ______ very happy
   b. ______ quite happy, most of the time
   c. ______ neither very happy nor very unhappy
   d. ______ a little on the unhappy side
   e. ______ very unhappy

24. What one kind of organization do you enjoy most?
   a. ______ service clubs (Rotary, Kiwanis, Lions, etc.)
   b. ______ religious organizations
   c. ______ fraternal organizations (Elks, Masons, Oddfellows, etc.)
   d. ______ recreational organization (Bowling leagues, Softball leagues, Square dance clubs)
   e. ______ country club
   f. ______ none of the above
Check one best answer.

25. When you needed an excuse for not doing something, which one have you preferred to give?
   a. another date
   b. a reasonable illness
   c. someone didn't want me to do it (parents, wife, boss, friend)
   d. work to be done
   e. something else

26. What would you do (or would you do) if a fellow worker had personal habits which you disliked?
   a. be friendly and hope he would improve
   b. ask him directly to stop, if he was annoying me
   c. try to help him to improve his bad habits by pointing them out to him
   d. ignore him and his habits as much as possible
   e. try to get one of us transferred

27. What has your experience with people been? I have found that:
   a. there is a lot of good in all people
   b. there is some good in almost everyone
   c. people are about as good as they have to be
   d. a surprisingly large number of people are mean and dishonest
   e. almost all people are just no good

28. How do you feel about your self-confidence?
   a. I am very confident of myself in any phase of activity
   b. I am quite confident of myself in most phases of activity
   c. I have quite a bit of self-confidence about my intellectual ability, but I am not as self-confident about my social abilities
   d. I have quite a bit of self-confidence about my social ability, but I am not as self-confident about my intellectual ability
   e. I lack some self-confidence in both intellectual and social activities

29. Looking back on your childhood, what area would you say gave you your greatest over-all distress?
   a. physical illness
   b. the feeling of not being wanted by parents or parent
   c. the feeling of not being wanted by schoolmates
   d. the feeling of not being wanted by teachers
   e. failure in some activity or thing you especially wanted to succeed in
Check one best answer.

30. How do you feel about the breaks you've had in life?
   a. I have had nothing but bad breaks
   b. I have had about an even share of luck
   c. I have had more than my share of bad breaks
   d. I have had more good breaks than bad ones
   e. Luck has been my way practically all the time

31. In the organizations to which you belong, which of the following best describes your general participation?
   a. Do not belong to any organizations
   b. Am not very active
   c. Am a reliable member, but do not wish to hold a position of importance
   d. Would like to hold an office, but have never had one
   e. Have held at least one important office
   f. Have held several important offices

32. What do you do, or would you usually do, if a member of the board made a sarcastic remark about you under the guise of humor?
   a. Mumble under your breath to someone else
   b. Make a "humorous" reply in return
   c. Make a serious reply
   d. Pay no attention to it
   e. Wait for a later chance to reply

33. When a man reaches age 65, should he:
   a. Retire and enjoy life
   b. Continue working, stay active
   c. Continue working only if he can't afford to retire
   d. Retire only if health is poor

34. How often do you find that your first impression of a person is the right one?
   a. Always
   b. Often
   c. Occasionally
   d. Rarely
   e. Never
Check one best answer.

35. How well do you like to be with people in a social setting?
   a. ______ enjoy being with people very much; very rarely like to be by myself
   b. ______ usually enjoy being with other people; prefer to be by myself only occasionally
   c. ______ like being with other people sometimes, and at other times like being by myself
   d. ______ prefer being by myself and only occasionally do I like to be with other people

36. Which one of the following job aspects have you disliked most about any job you have ever held?
   a. ______ couldn't plan future around job
   b. ______ couldn't use initiative
   c. ______ no encouragement to put forth greater effort
   d. ______ many days spent away from family
   e. ______ placed too much on my own

37. Which one of the following has bothered you the most about the way you have been treated on any jobs you have held?
   a. ______ too many interferences from higher-ups
   b. ______ too many details that turn me into a "high-priced office boy"
   c. ______ not enough opportunity to use my own judgment
   d. ______ lack of sufficient information provided upon which to base my decisions
   e. ______ insufficiently defined areas of authority

38. In which one of the following ways have you most desired greater opportunity in jobs which you have held in the past?
   a. ______ use of my imagination
   b. ______ exercise of my administrative ability
   c. ______ freedom to do the job as it should be done
   d. ______ relax now and then
   e. ______ exercise of my initiative

39. Which one of the following qualifications was most important to the success of the best manager you have ever known?
   a. ______ ability to deal effectively with people
   b. ______ ability to keep the pressure on until the job is done
   c. ______ knowledge of the technical aspects of administration
   d. ______ ability to size up a situation and act accordingly
   e. ______ technical knowledge of lines he handles
   f. ______ none of the above
40. Which one of the following qualifications was least important to the success of the best manager you have ever known?

a. ability to deal effectively with people
b. ability to keep the pressure on until the job is done
c. knowledge of the technical aspects of administration
d. ability to size up a situation and act accordingly
e. technical knowledge of lines he handles
f. none of the above

41. If you have a difficult decision to make what do you usually do?

a. make it just as soon as the evidence has been weighed
b. weigh the evidence and allow time for reconsideration

42. Which of the following would you consider to be most nearly the ideal work situation?

a. working with a large group (over 10)
b. working with a small group (less than 10)
c. working closely with one other person
d. working by myself

43. On the jobs you have held, which one of the following has been the most frequent source of problems?

a. blowing my top when under pressure
b. pushing my ideas too fast
c. reprimanding others too much for minor errors
d. not following through on my work
e. relying too much on others to do details

44. Generally, in your work assignments would you prefer:

a. to work on one thing at a time
b. to work on a couple of things at a time
c. to work on many things simultaneously

45. Which of the following activities gave you the greatest pleasure while in high school?

a. participation in organized high school sports events
b. social interaction with other students (dancing, dating, etc.)
c. participation in organized school activities including plays, band, and student government
d. achieving academic success
Check one best answer.

46. How greatly disturbed are you if something is left unfinished?
   a. _____ slightly
   b. _____ moderately
   c. _____ considerably
   d. _____ highly

47. When you make a wrong choice regarding a difficult decision, do you:
   a. _____ forget it
   b. _____ make an effort to forget it but it keeps popping up in my mind
   c. _____ make no effort to forget it

48. How often do you feel dissatisfied with yourself?
   a. _____ frequently
   b. _____ occasionally
   c. _____ rarely
   d. _____ hardly ever

49. In how many different cities, towns, or townships have you lived?
   a. _____ 1 to 3
   b. _____ 4 to 6
   c. _____ 7 to 9
   d. _____ 10 to 12
   e. _____ 13 or more

50. In evaluating your employees, which trait do you disapprove of most?
   a. _____ laziness or indifference
   b. _____ lack of imagination
   c. _____ "apple polishing"
   d. _____ sloppiness in work
   e. _____ something else
SECTION 4

Why These Statements

This section contains a series of statements. These statements come from a standardized questionnaire which has been given to persons from many different 'walks of life'. Some of the items may not appear to apply to you or may seem strange. However, in previous research studies the complete list of statements have proven to be useful. Because these statements have not been used with managers of retail farm supply businesses in the previous research studies, we would appreciate your response to each of the following statements. The statements are not used separately, but several statements are added together for one score. If you feel that some of the questions are too personal to answer, please skip those questions and go on to the rest of the questions in this section. Considering that your responses will be held in strict confidence and only totals and averages will be computed, we hope that you will not find it difficult to respond to all or nearly all of the statements.

Instructions

Read each statement, decide how you feel about it and then mark your answer by circling either the "T" or "F" following the statement. If you agree with a statement, or feel that it is true about you, answer TRUE. If you disagree with a statement, or feel that it is not true about you, answer FALSE.

True False

1. The only interesting part of the newspaper is the "funnies". T F

2. I looked up to my father as an ideal man. T F

3. Our thinking would be a lot better off if we would just forget about words like "probably", "approximately", and "perhaps". T F

4. I have a very strong desire to be a success in the world. T F

5. I liked "Alice in Wonderland" by Lewis Carroll. T F

6. I usually go to the movies more than once a week. T F

7. I have had very peculiar and strange experiences. T F
8. I am often said to be hotheaded. T F

9. I gossip a little at times. T F

10. I doubt whether I would make a good leader. T F

11. When I was going to school I played hooky quite often. T F

12. I have very few fears compared to my friends. T F

13. For most questions there is just one right answer, once a person is able to get all the facts. T F

14. I think I would like the work of a school teacher. T F

15. When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing. T F

16. I seem to be about as capable and smart as most others around me. T F

17. I usually take an active part in the entertainment at parties. T F

18. I think I would enjoy having authority over other people. T F

19. I find it hard to keep my mind on a task or job. T F

20. I have sometimes stayed away from another person because I feared doing or saying something that I might regret afterwards. T F

21. The trouble with many people is that they don't take things seriously enough. T F
22. It is always a good thing to be frank.  
23. A windstorm terrifies me.  
24. I often feel as if the world was just passing me by.  
25. People often expect too much of me.  
26. When in a group of people I have trouble thinking of the right things to talk about.  
27. School teachers complain a lot about their pay, but it seems to be that they get as much as they deserve.  
28. It is annoying to listen to a lecturer who cannot seem to make up his mind as to what he really believes.  
29. I don't blame anyone for trying to grab all he can get in this world.  
30. Planning one's activities in advance is very likely to take most of the fun out of life.  
31. I was a slow learner in school.  
32. I like poetry.  
33. There is something wrong with a person who can't take orders without getting angry or resentful.  
34. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world".  
35. I wake up fresh and rested most mornings.
<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.</td>
<td>Most people make friends because friends are likely to be useful to them.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>37.</td>
<td>It is all right to get around the law if you don't actually break it.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>38.</td>
<td>Parents are much too easy on their children nowadays.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>39.</td>
<td>I have a tendency to give up easily when I meet difficult problems.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>40.</td>
<td>I certainly feel useless at times.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>41.</td>
<td>I read at least ten books a year.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>42.</td>
<td>I have the wanderlust and am never happy unless I am roaming or traveling about.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>43.</td>
<td>I am sometimes cross and grouchy without any good reason.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>44.</td>
<td>Every citizen should take the time to find out about national affairs, even if it means giving up some personal pleasures.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>45.</td>
<td>My parents have often disapproved of my friends.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>46.</td>
<td>I should like to belong to several clubs or lodges.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>47.</td>
<td>Teachers often expect too much work from the students.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>48.</td>
<td>My way of doing things is apt to be misunderstood by others.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>49.</td>
<td>I have had blank spells in which my activities were interrupted and I did not know what was going on around me.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>
50. I am certainly lacking in self-confidence.  T  F
51. When I work on a committee I like to take charge of things.  T  F
52. I have had more than my share of things to worry about.  T  F
53. I am quite often not in on the gossip and talk of the group I belong to.  T  F
54. I like to keep people guessing what I am going to do next.  T  F
55. I think I would like to fight in a boxing match sometime.  T  F
56. In a group of people I would not be embarrassed to be called upon to start a discussion or give an opinion about something I know well.  T  F
57. If given the chance I would make a good leader of people.  T  F
58. I like to plan a home study schedule and then follow it.  T  F
59. I enjoy a race or game better when I bet on it.  T  F
60. I have often found people jealous of my good ideas, just because they had not thought of them first.  T  F
61. Sometimes at elections I vote for men about whom I know very little.  T  F
62. I very much like hunting.  T  F
63. In school I was sometimes sent to the principal for cutting up.  T  F
64. People pretend to care more about one another than they really do.  T  F
65. I like to read about history.  T  F

66. A person does not need to worry about other people if only he looks after himself.  T  F

67. I can honestly say that I do not really mind paying my taxes because I feel that is one of the things I can do for what I get from the community.  T  F

68. I am so touchy on some subjects that I can't talk about them.  T  F

69. The future is too uncertain for a person to make serious plans.  T  F

70. I like to talk before groups of people.  T  F

71. The man who provides temptation by leaving valuable property unprotected is about as much to blame for its theft as the one who steals it.  T  F

72. I am often bothered by useless thoughts which keep running through my mind.  T  F

73. I like to plan out my activities in advance.  T  F

74. I must admit I find it very hard to work under strict rules and regulations.  T  F

75. I like large, noisy parties.  T  F

76. I sometimes feel that I am a burden to others.  T  F

77. When prices are high you can't blame a person for getting all he can while the getting is good.  T  F

78. Only a fool would try to change our American way of life.  T  F
<table>
<thead>
<tr>
<th>Question</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>79. In school I found it very hard to talk before the class.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>80. I always try to do at least a little better than what is expected of me.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>81. Lawbreakers are almost always caught and punished.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>82. I would be very unhappy if I was not successful at something I had seriously started to do.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>83. I dread the thought of an earthquake.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>84. I am a better talker than a listener.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>85. I like science.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>86. I often lose my temper.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>87. My parents were always very strict and stern with me.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>88. I am bothered by people outside, on streetcars, in stores, etc., watching me.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>89. I often get disgusted with myself.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>90. Society owes a lot more to the businessmen and the manufacturer than it does to the artist and the professor.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>91. I like to read about science.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>92. I have never been in trouble because of my sex behavior.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>93. I think I would like to belong to a motorcycle club.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>94. I used to like it very much when one of my papers was read to the class in school.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>
95. I feel that I have often been punished without cause.  
   True False  

96. I would be willing to give money myself in order to right a wrong, even though I was not mixed up in it in the first place.  
   True False  

97. I often get feelings like crawling, burning, tingling, or "going to sleep" in different parts of my body.  
   True False  

98. I don't seem to care what happens to me.  
   True False  

99. We should cut down on our use of oil, if necessary, so that there will be plenty left for the people fifty or a hundred years from now.  
   True False  

100. When the community makes a decision, it is up to a person to help carry it out even if he had been against it.  
   True False  

101. I would rather have people dislike me than look down on me.  
   True False  

102. I must admit I try to see what others think before I take a stand.  
   True False  

103. People should not have to pay taxes for the schools if they do not have children.  
   True False  

104. In a group, I usually take the responsibility for getting people introduced.  
   True False  

105. I would be willing to describe myself as a pretty "strong" personality.  
   True False  

106. There are times when I act like a coward.  
   True False  

107. I must admit I am a pretty fair talker.  
   True False  

108. I must admit I have no great desire to learn new things.  
   True False
109. I have strong political opinions.  
110. I seldom worry about my health.  
111. I think I am usually a leader in my group.  
112. I have never seen a vision.  
113. The future seems hopeless to me.  
114. I have had no difficulty starting or holding my urine.  
115. I seem to do things that I regret more often than other people do.  
116. Disobedience to any government is never justified.  
117. I enjoy planning things, and deciding what each person should do.  
118. I would rather not have very much responsibility for other people.  
119. Success is a matter of will power.  
120. I usually have to stop and think before I act even in trifling matters.  
121. It is pretty easy for people to win arguments with me.  
122. I get pretty discouraged with the law when a smart lawyer gets a criminal free.  
123. I have not lived the right kind of life.  
124. I am quite a fast reader.  
125. I daydream very little.
126. At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it.  

127. I have had attacks in which I could not control my movements or speech, but in which I knew what was going on around me.  

128. I have a natural talent for influencing people.  

129. I have had no difficulty in starting or holding my bowel movement.  

130. I like to give orders and get things moving.  

131. I do not read every editorial in the newspaper every day.  

132. Any job is all right with me, so long as it pays well.  

133. I am embarrassed with people I do not know well.  

134. It often seems that my life has no meaning.  

135. I feel like giving up quickly when things go wrong.  

136. If people had not had it in for me I would have been much more successful.  

137. The one to whom I was most attached and whom I most admired as a child was a woman (mother, sister, aunt, or other woman).  

138. I am not afraid of picking up a disease or germs from doorknobs.  

139. It is more important that a father be kind than that he be successful.
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>140.</td>
<td>My skin seems to be unusually sensitive to touch.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>141.</td>
<td>I have often been frightened in the middle of the night.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>142.</td>
<td>I am not the type to be a political leader.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>143.</td>
<td>People seem naturally to turn to me when decisions have to be made.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>144.</td>
<td>I get sort of annoyed with writers who go out of their way to use strange and unusual words.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>145.</td>
<td>I dislike to have to talk in front of a group of people.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>146.</td>
<td>I work under a great deal of tension.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>147.</td>
<td>I have more trouble concentrating than others seem to have.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>
SECTION 5

Instructions

Here are a number of statements on which persons have different opinions. We would like to know your points of view on these statements. There are no "right" or "wrong" answers in the usual sense of a high score being necessarily the best. The purpose of this research study will be served best if you describe yourself and state your opinions as accurately as possible.

Read each statement and decide whether you feel it is true or false. Circle the "T" if you feel it is true or the "F" if you feel it is false.

Then ask yourself how certain you are of this choice. If you are very certain that a statement is true (or false) circle the 5. If you are only slightly certain that a statement is true (or false), circle the 1. The numbers 2, 3, or 4 may better describe your feelings of certainty. In this case, circle the appropriate number.

For example, consider the statement:

1 like ice cream.

Is this statement true or false about you? Circle "T" ("F"). How certain are you that this statement is true (false) about you? Circle the appropriate number.

Only if you are completely uncertain about a statement's truth or falsity about yourself circle both "T" and "F", but do not circle a number.

1. I never think about how I could help myself get ahead.

2. People who look to the future are foolish; it is what has already been done that counts.

3. People should always try to raise their standard of living.
4. Although I may often find myself talking about the importance of other things, I feel that money and position are the two things in life that really count.

5. I feel most alive when I think ahead to all the things I shall be able to accomplish in the future.

6. When a person betters himself, he does not necessarily become a better person.

7. A company that is alive is always trying to increase its profits.

8. I do not admire people who are constantly striving for things beyond their reach.

9. I would find it hard to face myself if I got no sign of personal progress each year.

10. There is no such thing as enough money; no matter what a person makes, he should try to earn more.

11. I do not welcome every new technical invention that makes our homes comfortable and efficient.

12. It is perfectly all right for people to live from day to day without doing any long range planning for their advancement.

13. There is something wrong with a person who doesn't take advantage of every opportunity to advance himself.

14. While some people may disagree with me, I believe that there is such a thing as a goal set too high.

15. I would spare no effort to move ahead in my line of work.
16. It's all very well to point to one's past achievements, but if a man is really good he's always looking forward rather than backward.  

17. People should not get used to living in any particular place because they should feel free to move on to jobs that offer more advancement.  

18. I often think there are limits to what I can accomplish even if I really throw myself into an activity.  

19. Instead of working for specific ends, men should strive to attain progress and advancement.  

20. Happiness in real achievement means working towards the impossible.
SECTION 6

Instructions

In this section you will find a number of statements. Read each statement carefully. If the statement seems to be true, or if you agree with it, circle the "Y" for yes following the question. If the statement is more false than true, or if you disagree with it, circle "N". If you cannot decide between "Yes" and "No", you may mark answer "?" BUT AVOID DOING THIS IF POSSIBLE.

Be sure to answer every item.

There are no "right" or "wrong" answers in the usual sense of a high score being necessarily the best. The purpose of this survey will be served best if you describe yourself and state your opinions as accurately as possible.

You may notice that many items are similar. Actually, no two items are exactly alike.

<table>
<thead>
<tr>
<th>Items</th>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You have more than once taken the lead in organizing a project or a group of some kind</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>2. When you find that something you have bought is defective, you hesitate to demand an exchange or a refund</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>3. In being thrown by chance with a stranger, you wait for him to introduce himself</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>4. If you hold an opinion that is radically different from that expressed by a lecturer, you are likely to tell him about it either during or after the lecture</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>5. You avoid arguing over a price with a clerk or salesman</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>6. You are satisfied to let someone else take the lead in group activities</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>7. When a person does not play fair you hesitate to say anything about it to him</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
<tr>
<td>8. You enjoy applying for a job in person</td>
<td>Y</td>
<td>?</td>
<td>N</td>
</tr>
</tbody>
</table>
9. The thought of making a speech frightens you  

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
</table>

10. You find it difficult to ask people for money or other donations, even for a cause in which you are interested

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
</table>

11. When you were a child, many of your playmates naturally expected you to be the leader

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
</table>

12. When a clerk in a store waits on others who should come after you, you call his attention to the fact

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
</table>

13. You hesitate to walk into a meeting when you know that everyone's eyes will be upon you

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
</table>

14. You are rather good at bluffing when you find yourself in difficulty

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
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15. At the scene of an accident, you take an active part in helping out

<table>
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<tr>
<th>Yes</th>
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16. You take the lead in putting life into a dull party

<table>
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<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
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</table>

17. When you are served stale or inferior food in a restaurant, you say nothing about it

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
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18. When you are attracted to a person whom you have not met, you make an active attempt to get acquainted even though it may be quite difficult

<table>
<thead>
<tr>
<th>Yes</th>
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19. You speak out in meetings to oppose those who you feel sure are wrong

<table>
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<tr>
<th>Yes</th>
<th>?</th>
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20. You like to sell things (that is, to act as a salesman)

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
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</table>

21. You would rather work for a good boss than for yourself

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
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</table>

22. You find it somewhat difficult to say "no" to a salesman who tries to sell you something you do not really want

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
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</table>

23. When you think you recognize someone you see in a public place, you ask him whether you have met him before

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
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</table>

24. You feel self-conscious in the presence of important people

<table>
<thead>
<tr>
<th>Yes</th>
<th>?</th>
<th>No</th>
</tr>
</thead>
</table>
25. You can think of a good excuse when you need one
   Y  ?  N

26. You would like to take on important responsibilities
    such as organizing a new business
   Y  ?  N

27. You find it difficult to get rid of a salesman to
    whom you do not care to listen or give your time
   Y  ?  N

28. You like to speak in public
   Y  ?  N

29. You seek to avoid all trouble with other people
   Y  ?  N

30. If someone you know has been spreading untrue and bad
    stories about you, you see him as soon as possible
    and have a talk about it
   Y  ?  N
SECTION 7

Instructions

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. Circle "T" if you feel it is true, circle "F" if you feel it is false.

1. Before voting I thoroughly investigate the qualifications of all the candidates. T F

2. I never hesitate to go out of my way to help someone in trouble. T F

3. It is sometimes hard for me to go on with my work if I am not encouraged. T F

4. I have never intensely disliked anyone. T F

5. On occasion I have had doubts about my ability to succeed in life. T F

6. I sometimes feel resentful when I don't get my way. T F

7. I am always careful about my manner of dress. T F

8. My table manners at home are as good as when I eat out in a restaurant. T F

9. If I could get into a movie without paying and be sure I was not seen I would probably do it. T F

10. On a few occasions, I have given up doing something because I thought too little of my ability. T F

11. I like to gossip at times. T F

12. There have been times when I felt like rebelling against people in authority even though I knew they were right. T F

13. No matter who I'm talking to, I'm always a good listener. T F
14. I can remember "playing sick" to get out of something.
   T  F

15. There have been occasions when I took advantage of someone.
   T  F

16. I'm always willing to admit it when I make a mistake.
   T  F

17. I always try to practice what I preach.
   T  F

18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
   T  F

19. I sometimes try to get even rather than forgive and forget.
   T  F

20. When I don't know something I don't at all mind admitting it.
   T  F

21. I am always courteous, even to people who are disagreeable.
   T  F

22. At times I have really insisted on having things my own way.
   T  F

23. There have been occasions when I felt like smashing things.
   T  F

24. I would never think of letting someone else be punished for my wrongdoings.
   T  F

25. I never resent being asked to return a favor.
   T  F

26. I have never been irked when people expressed ideas very different from my own.
   T  F

27. I never make a long trip without checking the safety of my car.
   T  F

28. There have been times when I was quite jealous of the good fortune of others.
   T  F

29. I have almost never felt the urge to tell someone off.
   T  F

30. I am sometimes irritated by people who ask favors of me.
   T  F

31. I have never felt that I was punished without cause.
   T  F

32. I sometimes think when people have a misfortune they only get what they deserve.
   T  F

33. I have never deliberately said something that hurt someone's feelings.
   T  F
THANK YOU VERY MUCH FOR YOUR COOPERATION IN COMPLETING THIS BOOKLET.

YOUR PROMPT RETURN OF THE BOOKLET TO IOWA STATE UNIVERSITY WILL BE GREATLY APPRECIATED.
CONFIDENTIAL

CONFIDENTIAL

CONFIDENTIAL

IOWA STATE UNIVERSITY
RESEARCH PROJECT 1626
Ames, Iowa

All the information in this schedule will be kept in complete confidence. You will never be identified with any of the information which you provide us.
### Instructions

Listed below are a number of statements. Each represents a commonly held opinion. There are no right or wrong answers. You will probably disagree with some items and agree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then indicate the extent to which you agree or disagree by CIRCLING the ONE NUMBER which best reflects your views.

First impressions are usually best on such matters. Be sure to give your opinion ON EVERY STATEMENT. Pick the one answer which is closest to the way you feel. Do not omit any questions.

<table>
<thead>
<tr>
<th>Circle One Number</th>
<th>Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. disagree strongly</td>
<td>The best way to handle people is to tell them what they want to hear.</td>
</tr>
<tr>
<td>2 disagree somewhat</td>
<td></td>
</tr>
<tr>
<td>3 disagree slightly</td>
<td></td>
</tr>
<tr>
<td>4 agree slightly</td>
<td></td>
</tr>
<tr>
<td>5 agree somewhat</td>
<td></td>
</tr>
<tr>
<td>6 agree strongly</td>
<td></td>
</tr>
</tbody>
</table>

| 2. disagree strongly | Most people are basically good and kind. |
| 2 disagree somewhat  |                                        |
| 3 disagree slightly  |                                        |
| 4 agree slightly    |                                        |
| 5 agree somewhat    |                                        |
| 6 agree strongly    |                                        |

| 3. disagree strongly | It is safest to assume that all people have a vicious streak and that it will come out when they are given a chance. |
| 2 disagree somewhat  |                                        |
| 3 disagree slightly  |                                        |
| 4 agree slightly    |                                        |
| 5 agree somewhat    |                                        |
| 6 agree strongly    |                                        |
4. 1 disagree strongly
   2 disagree somewhat
   3 disagree slightly
   4 agree slightly
   5 agree somewhat
   6 agree strongly

   Generally speaking, men won't work hard unless they're forced to do so.

5. 1 disagree strongly
   2 disagree somewhat
   3 disagree slightly
   4 agree slightly
   5 agree somewhat
   6 agree strongly

   When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight.

6. 1 disagree strongly
   2 disagree somewhat
   3 disagree slightly
   4 agree slightly
   5 agree somewhat
   6 agree strongly

   Anyone who completely trusts anyone else is asking for trouble.

7. 1 disagree strongly
   2 disagree somewhat
   3 disagree slightly
   4 agree slightly
   5 agree somewhat
   6 agree strongly

   The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.

8. 1 disagree strongly
   2 disagree somewhat
   3 disagree slightly
   4 agree slightly
   5 agree somewhat
   6 agree strongly

   It is hard to get ahead without cutting corners here and there.
SECTION 2

Instructions

On the following twelve pages are a number of statements about business management. We are interested in your feelings or opinion about each statement. You will probably agree with some of these statements. That is, some statements will express your own opinions or feelings about managing. Other statements will express feelings opposite to yours.

After you have read each statement, please circle the "A" (agree) if you agree with the statement or the "D" (disagree) if you disagree with the statement. Once you have made this decision, please indicate how strongly you agree or disagree with the statements by circling one of the numbers which appears to the right of each statement. If it really doesn't make much difference to you if you agree or disagree with the statement, circle 1. If you very strongly agree or disagree with the statement, circle 5. For some statements, the numbers 2, 3 or 4 may better describe how strongly you agree or disagree with the statement. When this is the case, circle the appropriate number.

For example, consider the statement:

All men are created equal.

Do you agree or disagree with this statement? Circle "A" ("D"). How strongly do you agree (disagree) with this statement? Circle the appropriate number.

Please be sure to circle both a letter and a number after each statement, unless you are completely undecided whether you agree or disagree with the statement. In that case, circle both "A" and "D", but do not circle any of the numbers. This response indicates that you neither agree nor disagree with the statement.

These statements are in no way designed to be a test. There are no right or wrong answers to the statements. The answers which will be most helpful to this research project are the ones which best reflect your own feelings about each of the statements.
1. It is better to make a smaller profit each year than to attempt something where there is some chance of losing.

2. Economic forces in man are stronger than moral forces.

3. So many products are coming out these days that it is impossible for the dealer to keep himself informed with respect to the lines he handles.

4. One of the most important things a manager can do is attend a training program where new ideas might be presented.

5. Actually you can rely on very few people.

6. For most decisions it's a good idea to get the advice from the board, but then go ahead and make your own decisions.

7. The influence a manager exerts really decides the financial outcome of a cooperative.

8. The nature of farm related businesses is such that uncontrollable circumstances are very important in determining the success of the business.

9. There is so much personal satisfaction in being a manager that income becomes relatively unimportant.

10. I regard myself as the kind of person who is willing to take a few more risks than the average manager.

11. The probabilities of success can be better estimated for a specialized business than for a diversified business.

12. It is natural for men to want to expend physical and mental energy in work.

13. It is more important to maximize profit in the business firm than it is to offer most of the services desired by customers.
14. Customers must be served even if it means a slight loss of income.

15. A co-op manager should ask himself how profitable each alternative is when deciding how to spend his time.

16. Most managers can improve their income through harder work instead of blaming the circumstances.

17. The important things in life can only be attained if a person has made a good income.

18. Many managers spend too much time and effort trying to keep themselves up-to-date on new things in business management.

19. Having many friends is more important than being a financial success.

20. Most managers can improve their income through better management instead of blaming the circumstances.

21. A manager's most important asset is a "strong back".

22. In this day and age a person can no longer afford to be independent and to rely on his own judgment in making decisions.

23. A manager should try to reduce the risk in his business by keeping his operation diversified, even though it may mean the loss of some future income.

24. Many of the new business practices a manager hears of are backed by good research and usually applicable to the business.

25. Managers who are willing to take more than average chances usually do better financially.
26. I admire the manager who can get a job done most efficiently due to effective planning.

27. If I feel that the odds are greater than 60-40 against an alternative course of action paying off, I look for other choices.

28. The average human dislikes work and will avoid it if he can.

29. Most dealers spend too much time and effort in keeping themselves up-to-date on new merchandising practices.

30. A manager's most important asset is his ability to think ahead.

31. People at all levels in local cooperatives possess the capacity to exercise imagination, ingenuity, and creativity in the solution of problems.

32. The world is simply too complex for a man to be completely independent.

33. The manager who gets ahead fastest is the one who sticks to the old proven ways of doing things.

34. At times it is best for a manager to choose an alternative about which the outcomes are completely uncertain in making a decision.

35. If I had a choice I would rather work with my hands than read a book.

36. The only real goal in managing is to maximize business profits.

37. My success is partly due to the fact that I can play the odds well.

38. I really respect an individual who makes his own decisions and is willing to stand behind them.
39. One of parents' greatest obligations is to teach their children to make decisions on their own uninfluenced by what others may say or do.

40. A manager must be willing to take a great number of risks to get ahead.

41. If a man is going to hire labor he should be willing to work right along side the man he's hired.

42. Human beings hardly ever learn to avoid making the same mistakes twice.

43. Inventory losses can be effectively hedged against.

44. It's difficult for children to get a good start in life unless you can provide them with economic assistance.

45. Attending a short course where new ideas might be presented is usually a waste of time.

46. Quite a few managers would be better off if they would spend less time going to meetings and more time in their business.

47. A parent's first responsibility is to assure the material security of his children.

48. Many managers spend too much time trying to think through alternate ways of doing a job rather than going ahead and doing the job the way they already know.

49. An employee is really more interested in his salary than the way a manager handles his suggestions.

50. It's only natural to look up to a man who has made a lot of money.

51. One of the best single indicators of whether or not a man will make a good manager is his ability to make his own decisions.
52. I think the traditional ways are the best ways of doing things.

53. A person should always be master of his own fate.

54. A manager must be willing to take a great number of risks to stay in business.

55. An individual should try to solve his own problems by himself.

56. The most successful manager is the one who makes the most profit for his business.

57. A manager cannot afford to make his decisions independently but should consult with those with whom he works.

58. Managing would be extremely difficult without the advice and help of my board.

59. High prestige should be accorded the manager who has made his business prosperous and thriving.

60. I feel the manager who has proven his financial ability should be given a strong voice in his community.

61. Families with modest incomes are happier than those who have lots of money.

62. Many managers should spend more time analyzing their records for operational efficiency and less time actually assisting in the keeping of business records.

63. For the most part an individual should "go it alone" and make his own decisions.

64. If you want to increase worker efficiency you have to apply more pressure.
65. I have a great deal of respect for the man who has made a lot of money.

66. It is better to live on an average income and enjoy life rather than spending all your time trying to maximize your income.

67. The manager's most important objective should be to make the business profitable.

68. A manager's willingness to spend some time assisting with day to day operations, such as with the grinding operation, is more important in a successful business than all the new ideas he reads or hears about.

69. The slack seasons in farm product handling can be overcome readily by good planning by the manager.

70. Most managers should spend more time reading research publications.

71. The desire for money is destroying the moral fibre of our country.

72. Some new ideas may hurt a business, but I don't let that stand in my way of trying some of the better ones.

73. It is important to take time to consider the alternative ways of doing a job before deciding which one is best.

74. A new manager would do well to find out the opinions of more experienced managers before making decisions.

75. Most workers don't really care whether a job is interesting and challenging.

76. Physical work is more satisfying and rewarding to me than mental activity.
77. A manager should never borrow large sums of money for operating capital.

78. A manager must keep up and apply new methods in business management to be able to compete.

79. Under the right conditions workers will seek and accept responsibility.

80. A co-op manager is in a good position to compete favorably in most any locality.

81. While it is true that a person may become too oriented toward making money, many managers would be better off if they would spend more time trying to make their business pay.

82. Rather than to continually borrow money a manager should work for a definite level of capital accumulation.

83. Most workers today don't work as hard as workers did 10 years ago.

84. The main reason that more managers aren't better off financially is that they aren't willing to make the "hard-nosed" decisions necessary to make the business profitable.

85. Those managers who have made the greatest financial success have been willing to deviate from what the customers considered to be right.

86. The price a person has to pay for financial success is not worth it.

87. Good managers take the time to seek out information and use this information in making decisions.

88. Although more risks are involved, new management practices pay off in the long run.

89. Many new managers get started off on the wrong foot by trying to make all the decisions themselves.
90. One of the most undesirable things about being a manager of a cooperative is that too many decisions are made for you by the board of directors.

91. A man in business for himself should be free to make his own decisions without any outside interference.

92. The variables in a business which are not under direct control of the manager, (such as location, plant facilities, and economic conditions) nearly determine the productivity of the business, regardless of the ability of the manager.

93. Good management is the most important factor in making a business successful.

94. The greatest satisfaction in being a manager comes in running a highly profitable business.

95. In order to stay in business a dealer has to keep learning and trying new things.

96. A manager is better off to continue traditional management practices since many of the new-fangled ideas are not suited to his business operation.

97. A good co-op manager does not have great difficulty overcoming stiff local competition.

98. Most managers are becoming so oriented toward making money, they don't have time to enjoy life.

99. I don't like to feel obligated to other people.

100. A manager's thinking and planning counts for more in business success today than do his regular chores.

101. One of the best ways to get ahead financially is to be independent in your decision making.

102. Good management can eliminate most of the risks involved in any business.
103. Having the freedom to make up my own mind is, to me, one of the major advantages in management.

104. A good co-op manager can make his business successful in spite of a board that places restrictions on him.

105. In general, managers are more important than boards of directors in ultimately influencing the financial outcome of a cooperative.

106. People in our society have become so concerned with conforming to the actions of others that we have lost a part of the independent thinking that made this country great.

107. New ideas in managing are all right but I don't use very many of them.

108. You can really get farther by talking with and cooperating with people.

109. A man can be more successful by striking out boldly on his own than he can by following the advice of others.

110. Most workers want to be directed and controlled.

111. It is better to stay as a manager of a firm with a lower salary and fewer problems than change to a firm with a higher salary and many problems.

112. A good manager can overcome most marketing problems that he faces.

113. A co-op manager can be successful even if his members—patrons are somewhat unhappy with his business practices.

114. Perhaps the greatest reward in a management position is the opportunity to make your own decisions.

115. Intelligence is more important in management than in most other business activities.
116. Losses due to market change can be effectively hedged against.

117. It is more important to me to be known as a person who gets along well with others and has a lot of friends rather than a person who likes to make decisions for himself.

118. One of the most important things a manager can do is to work out a long-range plan for his business operation.

119. The major reason for going to college is to be able to make a better income.

120. In the long run, a manager is better off to establish a pattern and stick with it rather than to continually change his business operation.

121. One of the major problems in our country today is that people are too concerned with money and the things money will buy.

122. In deciding about making changes in his business, a manager's first consideration should be "is it profitable."

123. I always evaluate a new idea or product for my cooperative and, if it looks good, I try it.

124. Many of the new merchandising ideas that come out these days are not practical for the average dealer.

125. A manager really can't afford to experiment with different ideas in the business.

126. The hours a manager puts in behind the desk are much more important to the success of the business than the hours he puts in operating the scales, helping with the grinding operation or other jobs requiring physical labor.

127. One of the best guides in making decisions is what has worked in the past.
128. People who have been at least moderately successful financially seem to contribute more to community life than people who have not been as successful financially.

129. Financial success has to be considered to judge a man's standing in his community, but influence should not be the privilege of the wealthy.

130. People who have been successful financially generally are more interesting people with whom to visit.

131. The best way to avoid trouble is to be as independent as possible.

132. Obtaining information on management is a necessary activity for the successful functioning of any manager.

133. Hours spent by a manager evaluating and making future plans for his business are generally more profitable than hours spent helping with the mixing or grinding operations.

134. The chances of preparing children to live good useful lives are pretty slim if you have just enough money to make ends meet.

135. There are so many desirable things in life that a person can afford to get along on a lower income to maintain these advantages.

136. A good manager is the one who can use his head as well as his back.

137. Jobs should contain as much challenge and opportunity as possible.

138. It is more important for the dealer to make decisions on the basis of past personal experience than to try to find out new ways to do things.

139. Time spent in learning about new management practices is time well spent.

140. A manager should always have a contingency fund in case of emergency.
141. Financial success is only one of many ways to judge a man's status in his community.

142. One of the most important things a manager can do is to be sure a good set of records is kept.

143. The man who stands alone is the man who is admired.

144. Thinking, reading, and planning are not really important to me in managing this business.

145. A man must be willing to make his own decisions, uninfluenced by the opinions of others.

146. It is more important for managers to make decisions on the basis of past experience and rules of thumb than to try to find new ways of doing things.

147. The financially successful man is naturally quite influential in his community.

148. There are more important things in life than trying to make a few extra dollars.

149. Managers must be allowed to make all their decisions by themselves.

150. If a man wants a thing done right, he must do it himself.

151. The independent spirit—spurning all aid, needing no one, self-reliant and free—this is man at his best.

152. A good manager can overcome errors made by his employees.

153. A real problem that many farm supply managers have is that they don't think through a set of goals and objectives for their business operation.
154. The best way to solve problems is to dig in and work on them immediately instead of wasting time trying to think of better or easier solutions.

155. In most cases a manager can save time in the long run by first sitting down and figuring the problem out.

156. People must be coerced into working.

157. Man will exercise self-direction and self-control in the service of worthwhile objectives.

158. Before trying any new practice or idea, it is pretty wise to wait and see how it is working out for some of the other businesses.

159. I would rather take more of a chance on making a big profit than to be content with a smaller but less risky profit.

160. It's good for a manager to take risks when he knows his chance of success is fairly high.

161. Though it may be slower, a good manager can be successful by taking only very few risks.
SECTION 3

Instructions

You will find groups of three statements each listed below. For each group of three statements,

- indicate the one with which you most agree, and

- the one with which you most disagree.

Indicate your choices by writing the statement number you agree or disagree with in the blanks in front of each question. For example, if you especially agree with statement number 1, write "1" in the appropriate space. If you especially disagree with statement number 3, write "3" in the appropriate space.

These statements refer to ways of thinking about people or things in general. They reflect your opinions, not matters of fact. There are no "right" or "wrong" answers and different people have been found to agree with different statements.

You will find some of the choices easy to make. Others will be quite difficult. Please answer all the questions. Do not omit any questions, no matter how hard they may be. Choose the best answer from among those given and answer all questions.

1. Most people who get ahead in the world lead clean, moral lives.
2. Any man worth his salt shouldn’t be blamed for putting his career above his family.
3. People would be better off if they were concerned less with how to do things and more with what to do.

(1)______is the statement with which I most agree.
(2)______is the statement with which I most disagree.
1. All in all, it is better to be humble and honest than to be important and dishonest.
2. A man who is able and willing to work hard has a good chance of succeeding in whatever he wants to do.
3. If a thing doesn't help us in our daily lives, it isn't very important.

(3)_____ is the statement with which I most agree.
(4)_____ is the statement with which I most disagree.

1. A person shouldn't be punished for breaking a law which he thinks is unreasonable.
2. Too many criminals are not punished for their crimes.
3. There is no excuse for lying to someone else.

(5)_____ is the statement with which I most agree.
(6)_____ is the statement with which I most disagree.

1. It is possible to be good in all respects.
2. To help oneself is good; to help others even better.
3. War and threats of war are unchangeable facts of human life.

(7)_____ is the statement with which I most agree.
(8)_____ is the statement with which I most disagree.

1. Barnum was probably right when he said that there's a sucker born every minute.
2. Life is pretty dull unless one deliberately stirs up some excitement.
3. Most people would be better off if they controlled their emotions.

(9)_____ is the statement with which I most agree.
(10)_____ is the statement with which I most disagree.
1. People who talk about abstract problems usually don't know what they are talking about.
2. Anyone who completely trusts anyone else is asking for trouble.
3. It is essential for the functioning of a democracy that everyone vote.

(11)_____ is the statement with which I most agree.
(12)_____ is the statement with which I most disagree.
Instructions

The following set of questions concerns your opinions, attitudes and background. Each question will have one best answer for you. Please place a check in the appropriate space for each question. Be sure to complete all questions.

1. Keeping in mind your high school experience, how would you rank yourself as a student?
   a. _____ in the best 5%
   b. _____ in the best 10%
   c. _____ in the best 25%
   d. _____ in the upper half
   e. _____ in the lower half

2. How much life insurance do you carry on yourself?
   a. _____ none
   b. _____ $1,000 to $5,000
   c. _____ $5,000 to $10,000
   d. _____ more than $10,000

3. During my teens I usually spent my summers:
   a. _____ vacationing
   b. _____ working in town
   c. _____ working on a farm
   d. _____ doing something else

4. How would you rank yourself as a manager?
   a. _____ in the top 5%
   b. _____ in the upper 20%
   c. _____ in the upper 50%
   d. _____ in the lower 50%
   e. _____ I don't know
Check one best answer.

5. In connection with your work, in which one of these have you taken most pride?

   a. ______ having been able to avoid any major controversies  
   b. ______ having gotten where I am on my own  
   c. ______ having provided a lot of new ideas, good or bad  
   d. ______ having been able to work smoothly with people  
   e. ______ having been able to do well whatever superiors requested of me  

6. Where would you belong in a list of 100 typical people in the kind of job you do best?

   a. ______ in the best 5%  
   b. ______ in the upper third  
   c. ______ in the middle third  
   d. ______ in the lowest third  
   e. ______ I don't know  

7. The factor that was most responsible for my choice of a career was:

   a. ______ personal plans made on my own  
   b. ______ advice from others  

8. What was the primary reason for your selection of your first full-time job?

   a. ______ good pay  
   b. ______ opportunity for advancement  
   c. ______ security  

9. Which one of the following goals would you most like to reach before retirement?

   a. ______ satisfaction with my own performance  
   b. ______ an efficient, prosperous business  

10. Which one of the following goals would you most like to reach before retirement?

    a. ______ be financially successful  
    b. ______ achieve community recognition as an outstanding manager
Check one best answer.

11. I would most:
   a.____ like to have a good deal of responsibility
   b.____ like to have a smooth-running operation

12. Assuming you have free choice, to whom would you go for advice on an exceptionally difficult business problem?
   a.____my board
   b.____ associates within my community
   c.____my assistant manager or other key employees
   d.____ other managers of businesses of this type

13. Do most people give you:
   a.____ much more respect than I deserve
   b.____ a little more respect than I deserve
   c.____ as much respect as I deserve
   d.____ a little less respect than I deserve
   e.____ a lot less respect than I deserve

14. How have you reacted to the advantages and opportunities that have been presented to you?
   a.____ I have taken advantage of every opportunity
   b.____ I have generally tried to take advantage of any opportunity
   c.____ I have taken advantage of some and not of others
   d.____ I have not had too many opportunities, but have taken advantage of the ones I have had
   e.____ I have failed to take advantage of any opportunities presented

15. How do you compare yourself with your associates in general athletic ability?
   a.____ I am very much better than most
   b.____ I am a little better than average
   c.____ I am about average
   d.____ I am a little poorer than most
   e.____ my associates are very much better than I
Check one best answer.

16. Which one of the following types of radio or TV programs do you like best?
   a. news, or sports events
   b. operas, symphonies, or concerts
   c. comedy or variety programs
   d. mystery plays
   e. cowboy shows
   f. practically never listen to the radio or TV

17. What is your usual state of health?
   a. never feel "under the weather"
   b. seldom feel "under the weather"
   c. sometimes feel "under the weather"
   d. often feel "under the weather"

18. Do you consider yourself a:
   a. nervous person
   b. fairly tense person
   c. fairly relaxed person except when the job tension builds up
   d. fairly relaxed person
   e. relaxed person

19. During your courtship, how did your family's financial circumstances compare with those of your wife's family?
   a. my family was much better off
   b. my family was a little better off
   c. both families were in about the same circumstances
   d. her family was a little better off
   e. her family was much better off

20. Which of the following best describes your actions when you have a tough business problem to solve?
   a. sit down and figure it out myself
   b. talk it over with my wife or friends
   c. talk it over with some of the key employees
   d. talk it over with my board of directors
   e. let it ride for a while, then tackle it fresh later on
Check one best answer.

21. How often do young people, outside of your immediate family, come to you for advice?
   a. never  
   b. rarely  
   c. occasionally  
   d. quite often  
   e. constantly  

22. In your opinion what is the best way to get people to do things?
   a. by driving them  
   b. by showing them  
   c. by kidding them into going along  
   d. by setting an example  
   e. some other way  

23. In your opinion, what have the people for whom you have worked thought of you? Thought I was -
   a. very different from them in emotional make-up  
   b. somewhat different from them in emotional make-up  
   c. only slightly different from them in emotional make-up  
   d. very much like them in emotional make-up  
   e. I have never given it much thought  

24. Which one of the following has helped you most in getting along with people?
   a. going along with majority opinion  
   b. standing up for my rights  
   c. giving others a lot of attention  
   d. not changing my views if I think I am right, despite pressure  
   e. changing my opinion when it is necessary  

25. What period of your life do you remember as your happiest?
   a. early childhood  
   b. school years  
   c. the immediate past  
   d. while in the armed forces  
   e. now
Check one best answer.

26. Which one of the following have you the most opportunity to do in your present job?

a. ______ use my imagination
b. ______ exercise my administrative ability
c. ______ do the job as it should be done
d. ______ relax now and then
e. ______ exercise my initiative

27. Looking back on the days you spent in your family or childhood home, were they:

a. ______ very happy
b. ______ quite happy, most of the time
c. ______ neither very happy nor very unhappy
d. ______ a little on the unhappy side
e. ______ very unhappy

28. How far did your wife go in school?

a. ______ did not complete eighth grade
b. ______ finished eighth grade
c. ______ some high school, but did not finish
d. ______ graduated from high school
e. ______ some college, or college graduate
f. ______ secretarial or vocational school

29. During your last two years in high school, about how many hours a week, both in and out of school, did you spend on athletics?

a. ______ none
b. ______ 1 to 4
c. ______ 5 to 9
d. ______ 10 to 14
e. ______ 15 or more

30. How do you usually act when you are angry?

a. ______ storm around for awhile letting off steam
b. ______ try not to show that I am angry at all
c. ______ never let my temper get the best of me
d. ______ talk it over with someone
e. ______ try to keep away from everybody for a while
Check one best answer.

31. How do you feel about your self-confidence?
   a. ______ I am very confident of myself in any phase of activity
   b. ______ I am quite confident of myself in most phases of activity
   c. ______ I have quite a bit of self-confidence about my intellectual ability, but I am not as self-confident about my social abilities
   d. ______ I have quite a bit of self-confidence about my social ability, but I am not as self-confident about my intellectual ability
   e. ______ I lack some self-confidence in both intellectual and social activities

32. Looking back on your childhood, what area would you say gave you your greatest over-all distress?
   a. ______ physical illness
   b. ______ the feeling of not being wanted by parents or parent
   c. ______ the feeling of not being wanted by schoolmates
   d. ______ the feeling of not being wanted by teachers
   e. ______ failure in some activity or thing I especially wanted to succeed in

33. How do you feel about the breaks you've had in life?
   a. ______ I have had nothing but bad breaks
   b. ______ I have had about an even share of luck
   c. ______ I have had more than my share of bad breaks
   d. ______ I have had more good breaks than bad ones
   e. ______ luck has been my way practically all the time

34. Which of the following best describes the interaction between you and your associates in a group situation?
   a. ______ I feel free to express my views, and they are usually well received
   b. ______ I feel free to express my views, but the group doesn't always share them
   c. ______ I am reluctant to express my views, but they are usually well received
   d. ______ I am reluctant to express my views and the group doesn't always share them
   e. ______ I listen to the views of others but seldom express my own
Check one best answer.

35. How often have you considered changing to some other line of work?
   a. ______ regularly
   b. ______ occasionally, at an earlier time
   c. ______ occasionally, at present
   d. ______ rarely
   e. ______ never

36. What amount of cooperation have you received from your employees on your present job?
   a. ______ definitely do not get cooperation on the job
   b. ______ get some cooperation on the job
   c. ______ get much cooperation on the job
   d. ______ get complete cooperation on the job

37. What amount of help and cooperation have you received from the board on your present job?
   a. ______ definitely do not get cooperation on the job
   b. ______ get some cooperation on the job
   c. ______ get much cooperation on the job
   d. ______ get complete cooperation on the job

38. What do you do, or would you usually do, if a member of the board made a sarcastic remark about you under the guise of humor?
   a. ______ mumble under your breath to someone else
   b. ______ make a "humorous" reply in return
   c. ______ make a serious reply
   d. ______ pay no attention to it
   e. ______ wait for a later chance to reply

39. What was the primary reason for your selection of your first full-time job?
   a. ______ because it was challenging
   b. ______ because in field of interest
   c. ______ as good training for future jobs
Check one best answer.

40. To what degree do you feel that your present job makes use of your abilities and capacities?

- a. ______ demands minimum use of capability
- b. ______ demands moderate use of capability
- c. ______ demands much use of capability
- d. ______ demands maximum use of capability

41. In your co-op, which one of these is most descriptive of the people who work for you in this co-op?

- a. ______ there is too much time wasted unnecessarily
- b. ______ there is not enough loyalty to the organization
- c. ______ there are too many people bluffing their way along
- d. ______ there are too many people who haven't enough drive
- e. ______ there are too many people just interested in their own individual advancement

42. In which one of the following ways have you most desired greater opportunity in jobs which you have held in the past?

- a. ______ use of my imagination
- b. ______ exercise of my administrative ability
- c. ______ freedom to do the job as it should be done
- d. ______ relax now and then
- e. ______ exercise of my initiative

43. In which one of the following ways has your professional progress been most handicapped?

- a. ______ being too easy-going
- b. ______ being too forceful
- c. ______ being too creative
- d. ______ being too interested in details
- e. ______ being too interested in immediate gain

44. Which one of the following qualifications was most important to the success of the best manager you have ever known?

- a. ______ ability to deal effectively with people
- b. ______ ability to keep the pressure on until the job is done
- c. ______ knowledge of the technical aspects of administration
- d. ______ ability to size up a situation and act accordingly
- e. ______ technical knowledge of lines he handles
- f. ______ none of the above
Check one best answer.

45. Which one of the following qualifications was least important to the success of the best manager you have ever known?

   a. _____ability to deal effectively with people
   b. _____ability to keep the pressure on until the job is done
   c. _____knowledge of the technical aspects of administration
   d. _____ability to size up a situation and act accordingly
   e. _____technical knowledge of lines he handles
   f. _____none of the above

46. How do you feel about the time you have to do your job?

   a. _____have time for everything without feeling pushed
   b. _____wish I had a little more time to plan and to think
   c. _____necessary to keep pushing to get everything done
   d. _____very hard to do what is expected of me in the time available

47. How often do you feel dissatisfied with yourself?

   a. _____frequently
   b. _____occasionally
   c. _____rarely
   d. _____hardly ever

48. In how many different cities, towns, or townships have you lived?

   a. _____1 to 3
   b. _____4 to 6
   c. _____7 to 9
   d. _____10 to 12
   e. _____13 or more

49. Working with others on the job:

   a. _____makes the work more pleasant
   b. _____increases tension
   c. _____interferes with getting the work done
   d. _____helps by providing new ideas and giving support
   e. _____does not make much difference
50. Which one of the following seems most important to you?

- a. ______ a pleasant home and family life
- b. ______ a challenging and exciting job
- c. ______ getting ahead in the world
- d. ______ being active and accepted in community affairs
- e. ______ making the most of my particular ability
Thank you very much for your cooperation in completing this booklet.

Your prompt return of the booklet to Iowa State University will be greatly appreciated.