1967

Sociological and social-psychological factors and economic success of retail firms

Jerry Dean Stockdale
Iowa State University

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AND ECONOMIC SUCCESS OF RETAIL FIRMS

by

Jerry Dean Stockdale

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
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Dean of Graduate College

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1967
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INTRODUCTION

The Situation

This thesis is concerned with social and social-psychological factors related to economic success of small retail firms. Of especial interest are the various retail firms providing goods and services to farmers. Included among these are farm machinery dealerships, farm supply stores, grain elevators, and various other retail suppliers of agricultural production inputs.

These firms are deeply involved in the various changes taking place in agriculture. The products provided by these firms are partly responsible for the changes in farming. And the increased size, capitalization and mechanization of farming mean many things to these retail firms. For example, the amount spent on agricultural production inputs (at retail outlets) has increased greatly in recent years. The grand total of cash expenditures for production supplies and equipment by farm operators in the United States increased from approximately 12.9 billion dollars in 1957, to 14.3 billion in 1960, to 16.6 billion in 1963, to 17.5 in 1965 (115; 116; 117; 118). In 1965 production expenses by farmers in the United States included: approximately 5.9 billion dollars on feed, 1.7 billion on fertilizer and lime, 1.5 billion on petroleum fuel and oil for motor vehicles, 991 million for tractors and 2.0 billion for other farm machinery and equipment (118). The grand total of farmers' expenses for non-supply production items (services, etc.) has also increased in recent years.

The changes in farming, however, are not necessarily all to the
advantage of retail firms. As the average size of farms has increased the number of farms and the number of farmers have decreased.\(^1\) There are, thus, fewer customers for the retail firms. The inputs demanded by these farmers are more expensive and complicated now than at any time in the past.

Some retail firms have prospered from these changes while others have had serious difficulties. Some have been unable to survive the changes.

The farm machinery business\(^2\) provides an example of the implications of the changes in farming and agricultural technology for retail firms serving farmers. The number of farm machinery dealerships in the United States is decreasing. There were approximately 32,700 retail outlets selling some machinery in the United States in 1948 compared to only about 16,900 in 1963 (44). In general the dealerships which are in business today are larger and more highly capitalized than dealerships were in the past. The possession of management skills by dealers has become increasingly important.

Although dealerships have tended to become larger, there is still much variation among them. Some farm machinery dealerships in Iowa sell only one or two new tractors a year while others sell more than 50.

\(^1\)This decrease in the number of farmers has myriad implications not only for retail firms but also for rural towns, schools, churches and local governments.

\(^2\)Farm machinery dealerships are used throughout this thesis as an example of retail firms serving agriculture. The empirical data all pertain specifically to farm machinery dealerships.
Some employ one or two persons while others have twenty or more employees. In some the dealer does much repair work himself; in others he does none. Some dealers say their job is mainly one of management. Other dealers emphasize different activities and skills. There are farm machinery dealerships in Iowa which do over a million dollars worth of total business a year, while others have less than 50,000 dollars of gross income from sales and service. The range in dollar volume of sales of new farm machinery not including parts for a sample of 79 farm machinery dealerships in Iowa in 1962 was from 1900 dollars to 545,000 dollars.¹ Some of these dealers lost money; others made large profits. What accounts for these differences among dealers? Why are some dealers more successful than others?

Differences in economic success among retail firms are a result of many factors. A main concern of this thesis is to indicate what some of the factors are. The approach is a sociological and social-psychological one. Personality system and social system variables are emphasized.

The Objectives of this Thesis

This thesis derives from two levels of intellectual activities. On a practical level the concern is with differences in economic success among retail firms (including farm machinery dealerships) in a situation

¹Unless otherwise indicated the data in this thesis are from a study of farm machinery dealers in Iowa.
of agricultural change -- Why are some retail firms more successful than others? On a theoretical level the concern is with the influence of various sociological and social-psychological factors on social action and outcomes of action -- What variables must be considered in explaining action and outcomes of action in social systems?

By focusing on retail firms serving agriculture as social systems and on economic success of these firms it is possible to treat both of these levels of problems in one analysis. This is the strategy of this thesis. A conceptual framework has been developed which is intended to be applicable to a wide range of problems of small retail firms. In developing the framework special attention was devoted to delineating the variables most relevant to social action and outcomes of action in retail firms. Economic success was conceptualized as a goal of retail firms and as an outcome of action (especially as an outcome of decisions made by managers).

Both personality system variables and social system variables are emphasized in this thesis. Among the variables which are emphasized somewhat more than others are beliefs, values, and attitudes. The question to be answered is not simply whether or not beliefs, values, and attitudes are related to action and to outcomes of action. On the basis of past research it can be said with assurance that some beliefs, values, and attitudes are related to certain types of behavior while others are not. The problem is one of identifying the specific beliefs, values, and attitudes which are related to specific actions and outcomes of actions. It is also important to specify the conditions under which
such relationships hold. This is also true for other personality and social system variables. It is not sufficient simply to say they are related to outcomes of action. Information is needed on the nature of the relationships. What is desired is to be able to say not only that personality and social system variables tend to be related to certain relevant actions and outcomes of action but also to be able to specify the particular variables which tend to be related, the nature of the relationship, and the conditions under which the relationships tend to exist. An ultimate goal would be to understand the processes by which independent variables bring about changes in dependent variables.

The objectives of this thesis relate both to the practical and to the theoretical levels of concern.

**Objective 1:** To delineate some of the variables which influence economic success in retail firms and to test for relationships.

**Objective 2:** To develop a conceptual framework which is relevant not only to economic success but also to a wide range of problems of retail firms. ¹

**Thesis Outline**

The objectives stated above guide the remainder of this thesis. The chapter which follows contains the conceptual framework of the thesis. The framework is based on the notion of social action and

¹The conceptual framework which has been developed includes many variables. Only certain of these variables were operationalized for this thesis. The conceptual framework is intended to be general enough to be applicable to future studies of retail firms.
systems of action. It is suggested that outcomes of action, including economic success of retail firms, are functionally related to personality systems of social actors, to social systems, to culture and to relevant physical objects. Personality systems and social systems are emphasized. Elements and processes of personality systems and social systems are discussed.

Theoretical propositions and hypotheses are presented next. Three theoretical propositions pertaining to economic success of retail firms were derived from the conceptual framework. One of these suggests that personality systems are related to economic success of retail firms. Another posits a relationship between social systems and economic success. The third suggests that activities of managers are related to economic success. General hypotheses and specific hypotheses are presented following each of these theoretical propositions.

Then the methods and procedures used in testing the hypotheses are discussed. The field study which provided the data for this thesis is discussed. The operational measures of the main concepts contained in the specific hypotheses are presented. The statistical methods used to test for significance of relationships (zero order correlation and multiple correlation) are also discussed briefly.

The findings are presented next. The theoretical propositions, general hypotheses and specific hypotheses are listed. Each specific hypothesis is followed by two or more empirical hypotheses. The results of the empirical hypotheses are presented and are related back to the specific and general hypotheses.
The findings chapter is followed by the discussion chapter. In this chapter the findings are summarized. Then the theoretical approach, the methodology and the findings of the thesis are evaluated and 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 an appendix. The appendix contains two tables. The correlation coefficients between the independent variables and the dependent variables are listed in Table 15. Table 16 contains the matrix of correlations between all of the variables used in this thesis.
CONCEPTUAL FRAMEWORK

Introduction

This chapter contains the conceptual framework for this thesis. This framework was developed in light of two main considerations. First it was desired to develop a framework which could provide insights into the questions with which this thesis is concerned. Such a framework should also provide a guide for empirical investigation of these questions. Second the framework was intended to be general enough to be pertinent to a large variety of such questions (for future use).

In developing such a framework it is always necessary to decide how general or how specific the framework is to be. Conceptual frameworks are always abstract and always partial. It is necessary to decide which factors to include and which to exclude from the framework. The goal is to include the factors which are most relevant to the particular problem or range of problems to which the framework is intended to apply.

The conceptual framework which is presented in this thesis is relatively general. The hypotheses which were derived from this framework (not necessarily in rigorous deductive fashion) all pertain to economic success of retail firms.

In a sense any conceptual framework is a creation of many people. As a science develops various concepts are defined and clarified by various writers and relationships between the concepts are suggested. The conceptual framework presented here draws heavily on the work of
various sociologists (16; 64; 89; 106) and social psychologists (80; 99; 103).

An important lead for the development of the conceptual framework was provided by Loomis' concern with elements and processes in social systems (64). Elements and process are discussed in this thesis for both personality systems and social systems. The writings of Parsons, especially *Toward a General Theory of Action* (89), have been an important source of ideas for this thesis. The approach of Jacob and Flink (45) which combines the Parsonian and the Lewinian (Field Theory) frameworks has also been an important source of ideas.

In developing his "general theory of action" Parsons was concerned with social action on all levels. Possibly as a result of its extreme generality, the "general theory of action" is very complex. The conceptual framework of this thesis is intended to be less general than the Parsonian approach and also less complicated. Some of the phenomena with which Parsons was greatly concerned are either not considered, or are treated only lightly, in this thesis. For example, functional problems of systems have been very important to Parsons. They are not emphasized in this thesis. The pattern variables have occupied a very important place in the Parsonian approach; they are given only modest consideration in this thesis.

The concern of this thesis is with the influence of characteristics of the actor and of the situation on action and outcomes of action. Structural aspects of, and ongoing processes in, personality systems, and social systems are emphasized. The development of such systems,
however, is not stressed. Analysis of such development is important to a complete theory but is not considered essential to the problems with which this thesis is concerned.

The conceptual framework of this thesis centers on the notion of social action. Managers of retail firms (including farm machinery dealers) are social actors and retail firms are action systems (social systems).

Social Action

One way of viewing economic success of retail firms is as an outcome of action. Such an approach assumes that the actions of a manager in situations result in the economic success of the business he manages. The success of firms vary, then, as managers' actions vary and as their situations vary. In equation form this can be expressed as follows:

\[
\text{Outcome of Action} = f(\text{Action, Situation}) \quad \text{Equation 1}
\]

(e.g., Economic success)

The outcome of action with which this thesis is concerned is economic success of retail firms. Action refers to the activity of managers. Action includes both overt physical activity and mental activity such as decision-making. This inclusion of mental activity is important since such activities as planning and decision-making are generally considered to be among the most important activities of persons in management positions.

Action is called social action when the individual who acts takes
into consideration the way his actions will be interpreted by other persons and the way they will react to his action. This is consistent with Weber's suggestion that:

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 (126, p. 88).

The person who acts is referred to as an "actor"¹ (89). A main assumption about the actor is that he acts in terms of his orientations to situations (89). Or in W. I. Thomas' terms he acts in terms of a "definition of the situation" (111). This is also the approach of Jacob and Flink. They state:

...our assumption is that the actor's own definition of a situation is what influences his actions. Whether or not his definition is accurate (coincides with objective fact) and whether it happens to agree with the observer's appraisal of "reality" is a relevant but different matter. (The accuracy of the actor's apprehension of a situation will have much to do with the success or failure of his actions, and this success or failure may result in his redefining the situation thus influencing his future actions) (45, p. 9).

The notion of the orientation of the actor and definition of the situation emphasizes that social action is not simply a mechanistic response to stimuli. Man interprets; he seldom simply responds (15; 16).

Three main aspects of actors' orientations can be distinguished analytically. These are the cognitive, affective and motivational

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¹In the Parsonian framework the actor refers to collectivities as well as to individuals since members of collectivities often engage in concerted activity. In such a framework the retail firm could be treated as a social actor. The concern of this thesis, however, is mainly with managers as actors.
aspects of orientations. The cognitive aspect of the actor's orientation to a situation refers to what the actor thinks about the situation and objects in the situation. It refers to his beliefs (his ideas of what actually is) and his values (his ideas of desired states of affairs) as they relate to the objects in the situation. The affective aspect of the orientation of the actor refers to his feelings toward objects in the situation. It refers to his sentiments. The motivational aspect of the actor's orientation to the situation refers to the actor's tendency to act in the situation and to define the situation in terms of his own goals.

The actors with which this thesis is mainly concerned are managers of retail firms (including farm machinery dealerships). Other actors are considered important mainly to the extent that they must be taken into consideration by the manager and can influence his actions and his success. Such other actors include customers, employees and manufacturing company personnel.

These other actors enter Equation 1 as part of the situation of the actor. The word situation is an inclusive term. It refers to

---

1 This formulation is based on the distinction of cognitive, affective and motivational components of attitudes (99). This formulation is different from Parsons' (89) categorization of value orientations. In outline form his categorization is as follows:

1. Motivational orientations
   a. cognitive
   b. cathetic
   c. evaluative

2. Value-orientations
   a. cognitive
   b. appreciative
   c. moral.
everything which is relevant to the action of the actor and the outcomes of his action. According to Parsons (89) the situation can be analytically divided in categories. The main distinction is between social objects and nonsocial objects. Social objects include both single individuals (personality systems) and organized aggregates of individuals (social systems).

There are two main categories of nonsocial objects. These are cultural objects and physical objects. Physical objects refer to physical things. According to Parsons (89) physical objects can function as facilities (means) in achieving various ends and as rewards. Physical objects can also exist simply as part of the environment in which a person acts.

Cultural objects include such nontangible entities as norms, values, and beliefs. According to Parsons (89) culture can be transferred from one generation to the next by learning. The learned ways of doing things, which are an important part of modern technology, are cultural objects while the physical facilities which are a part of the technology are categorized as physical objects. Time (epoch) and geographical location are both reflected in culture and physical objects.¹

The basic concern of this thesis is with the influence of the attributes of social actors and social systems on actions and outcomes of actions (with the influence of personality and social systems on economic success). In such a framework action becomes an intervening

¹An additional condition for action which isn't included in the categories of situation above is climate.
variable between the personality system and an outcome of action (economic success). This can be diagrammed as follows:

![Diagram of Personality, Situation, Action, and Outcome of Action]

Figure 1. Personality, situation, action and outcome of action

The part of Figure 1 which indicates that action derives from the personality and the situation is analogous to a basic tenet of "field theory". According to field theory behavior (B) is a function of life space (L) and life space is a product of the interaction between the person (P) and his environment (E). In symbolic expression, 

\[ B = f(L) = f(P \cdot E) \] (45; 60).

Equation 1 can now be replaced with the following equation:

\[ \text{Outcome of Action} = f(\text{Personality, Situation}) \] Equation 2 (e.g., Economic Success)

As has already been suggested, the situation can be divided into categories as follows:
Figure 2. Components of a situation

If situation in Equation 2 is replaced by the various categories of situation and the personality of the actor is distinguished from other personality systems, then Equation 2 becomes:

\[
\text{Outcome of Action} = f \left( \text{Personality of Actor (the manager)}, \text{Other Personality Systems, Social Systems, (e.g., Economic Culture, Physical Objects)} \right)
\]

Equation 3

A point of distinction between social objects and nonsocial objects is very important (89). Social objects enter Equation 3 in two ways. First, they are objects to be taken into consideration by the actor (the manager). He tries to predict how his actions will be interpreted by others and he acts accordingly. Second the social objects are actors in their own right. Their actions influence the outcome of the actions of the actor. Nonsocial objects, on the other hand, do not perform social action (they do not act in terms of a definition of the situation). Cultural objects are important since they are internalized
by actors and institutionalized in social systems. Physical objects are important mainly as facilities, obstacles and rewards.

Equation 3 summarizes the basic approach of this conceptual framework. It indicates that (when one focuses on the personality of the social actor in explaining outcomes of action) outcomes of action are a function of the personality of the actor and of other personality and social systems as well as the cultural system and relevant physical objects. These various factors which influence outcomes of action (personality systems, social systems, culture, and physical objects) are each discussed in more detail in the following pages.

**Personality system**

The personality system is one of the three systems which have been of major concern to Parsons (86; 89). This thesis follows the Parsonsian approach in considering the personality system to be analytically distinguishable from the social system and from culture. What Parsons refers to as the biological system and the personality system, however, are not treated as separate systems here (Parsons treated them as separate systems in *Theories of Society* (90)). The biological system and the personality system are treated here as components of one system. What Parsons referred to as the biological system is called the biological component of the personality. What Parsons referred to as the personality system is referred to in this thesis as the self component of the personality system.

The personality system is considered to have a certain unity which involves both the biological component and the self component. An
important aspect of this unity is the actor's own impressions (conceptions) of his own self. What the actor thinks he is, both biologically and in terms of his ideas, beliefs, values, etc., is basic to the unity of his personality. This image which an actor has of himself is called his self-conception.

In Parsons' terminology an actor's own personality can be an object in his social situation, just as other actors in the situation can be social objects (89). Each actor not only has ideas about what other persons are like; he also has ideas about what kind of a person he is. In Mead's terminology an actor has a "me" (a reflexive self, a self as an object) as well as an "I" (an acting self) (72). According to Cooley individuals have a "looking glass self" (24). This looking glass self is a social self. It is a result of the individual's experiences with other persons and of these other person's reactions to him. According to Cooley:

A self-idea of this sort seems to have three principle elements; the imagination of our appearance to the other person; the imagination of his judgment of that appearance and some sort of self-feeling, such as pride or mortification (24).

The characteristics, traits and abilities of an actor (both physical and social) and the reactions of others to them are, thus, important to his self-conception.

Figure 3 indicates the way the personality system is conceptualized in this thesis. The biological component of the personality system includes energy, and innate physical and mental potentialities. In some respects the biological component corresponds to the Freudian Id,
Personality system

<table>
<thead>
<tr>
<th>Self component (the social self)</th>
<th>Biological component (the organism)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs</td>
<td>Energy, innate physiological and mental potentialities</td>
</tr>
<tr>
<td>Attitudes, beliefs, values, goals, sentiments, learned skills, self-conception</td>
<td>Motives, Traits</td>
</tr>
</tbody>
</table>

Figure 3. The personality system containing everything that is fixed at birth (31). The aspects of the self component which are emphasized include attitudes, values, beliefs, goals, sentiments and symbolic skills.

Motives, needs and traits are located between the biological and the self components of the personality system in Figure 3. This is because they are considered to derive both from the biological system of the actor and from his learning experiences. Both motives and needs involve energy mobilization and the direction or channeling of that energy. The energy itself derives from the biological organism. The energy is directed and channeled mainly by the self component of the personality.

Elements of the personality system Some of the elements of the personality system which are most important to the range of human behavior with which this thesis is concerned are presented below. An understanding of these elements of the personality system should provide insights into the effect of the personality system on action and outcomes of action. The elements of the personality system which are
considered include needs; wants, wishes, and desires; goals; values; beliefs; knowledge; attitudes; interpersonal response traits; intelligence and symbolic skills. Some important processes of the personality system are discussed following the discussions of the elements. These processes include perceiving, learning, thinking, cognitive-mapping and decision-making.

**Needs**  
There appears to be no clear consensus among social scientists on what is meant by the term needs. Do needs refer strictly to what is necessary if the biological organism is to survive? Or do needs refer to what is necessary if he is to be happy? Are needs different from wants, wishes and goals?

In this thesis needs are considered to be closely related to motivation. They provide both energy and direction for motivation. They are considered to be analytically distinguishable from some other factors, such as wants and goals, which are also closely related to motivation.

Fromm distinguished two categories of needs -- animal needs and human needs (32). Animal needs refer to the basic necessities for the survival of the organism. Human needs refer to what is necessary for sanity and mental health. According to Fromm:

The basic psychic needs stemming from the peculiarities of human existence must be satisfied in one form or other, unless man is to become insane, just as his physiological needs must be satisfied lest he die (32, p. 67).

This approach to needs is essentially the approach of this thesis. This approach can be compared to other ways of approaching needs. Maslow, for example, has suggested the following hierarchy of needs:

1. physiological needs
2. safety needs
3. belonginess or love needs
4. esteem needs
5. need for self actualization (70, p. 394).

According to Maslow's formulation the lower order needs are predominant until they are satisfied then higher order needs take precedence. The lowest level of needs, physiological needs, appears to be identical to Fromm's category of animal needs. The other four levels could conceivably be designated as human needs. It is not clear to what extent each must be satisfied if an individual is to maintain his sanity (e.g., the battlefield is an extremely unsafe place but not all combat soldiers have mental problems). It would appear, however, that at least some minimum of satisfaction of the five needs suggested by Maslow would be necessary to life and sanity.

The four wishes suggested by W. I. Thomas are quite similar to the higher order needs mentioned by Maslow. According to Thomas:

The human wishes have a great variety of concrete forms but are capable of the following general classification:

1. The desire for new experience
2. The desire for security
3. The desire for response
4. The desire for recognition (111, p. 741).

Thomas' desire for security, desire for response and desire for recognition appear to parallel, respectively, Maslows' safety needs, belongness or love needs and esteem needs. The desire for new experience, while not identical with the need for self actualization, is fairly close to it. The Four Wishes, then, might also be included as human needs in Fromm's categorization of needs.
Other social scientists have also emphasized the importance of particular needs to human behavior. Among these are need for achievement (also called the achievement motive) (4; 35; 71), need for affiliation (4), need for esteem (89) and need for approval (85; 89). Need for esteem and need for approval closely resemble Thomas' desire for recognition and Maslow's esteem needs. Need for affiliation is approximately analogous to Thomas' desire for response and Maslow's belongingness or love needs. While need for achievement is not strictly analogous to the desire for new experience nor to the need for self actualization, it is somewhat similar. Achievement in learning new skills (new experience) is a form of self actualization.

The consideration of needs by Fromm (32), Thomas (111), Maslow (70), Parson (89), McClelland (71), and by numerous other social scientists is indicative of the importance of needs to human behavior. The need for security, the need for response and the need for recognition are among the human needs receiving the most emphasis.

Wants, wishes, desires Some persons prefer the term wants rather than needs (56). This is undoubtedly due to the difficulties involved in determining whether what is desired is necessary to the maintenance of life and sanity. Wants tend to indicate anything an individual has learned to think he needs.

In this thesis it is assumed that the terms wants, wishes and desires refer simply to what individuals would like to have or would like to have happen. They are different from needs since they don't specify conditions necessary either to life or sanity. They are different from
goals since they don't necessarily involve any willingness to seek their attainment.

Goals Even though they may be satisfied in many different ways and may vary in intensity and centrality, the needs which an actor has are common to all human individuals. Wants and goals, however, differ from one actor to another and these differences are, in part, responsible for differences in behavior. Goals refer to ends which an actor is willing to try to achieve. They specify desired states of affairs which the actor is willing to expend energy to attain. Goals may be easily attainable or they may involve great toil and sacrifice. They may be short-run goals or they may be long-range "ends in view" (25).

An assumption of this thesis is that most human behavior is goal directed. This means that when man acts he does so with certain "ends in view", whether or not these goals have been explicitly formulated. It is also assumed that each actor has a multiplicity of goals. He doesn't act strictly in terms of any one goal. Rather, he acts in terms of that set of goals which is most important to the particular situation in which he is involved. Thus the goal of maximization of income, which is a key feature of "economic man", is only one of the possible goals which might motivate the activity of an actor.

Some goals are much more important to a social actor than are others. Often the actor must choose which goal he will try to achieve at a particular point in time. A frequent conflict in goals is between long-range goals and immediate goals. The actor must decide between
instrumental and consumatory activity. As Parsons (86) has suggested, if the actor always chooses consumatory activity he may never get ahead in the long run. On the other hand, if he always chooses long-run goals and seldom receives gratification in the short run, the lack of rewards may adversely affect his motivation -- he may lose interest. Some balance between immediate and long term goals is probably the most practical choice (and also the most common). An example of the need to choose between immediate and long term goals for managers of retail firms is the need to choose between immediate personal use or reinvestment of profits.

Goals are elements of social systems and culture as well as elements of personality systems. Social systems such as retail firms have goals for which the members are willing to expend resources. Also goals can be transferred from one generation to another as part of culture. The section on the social system contains a discussion of goals treated on the social system level; especially as they apply to retail firms such as farm machinery dealerships. Goals are closely related to values.

Values

Values are elements of personality systems, social systems and culture which have received extensive consideration by sociologists and cultural anthropologists. Values pertain to the evaluative aspect of human mental processes. Values are the standards used in evaluating the relative worth of an object or a state of affairs. They (values) are general ideas that certain relationships ought to exist between phenomena (122).
According to Parsons (89), values are elements of personality systems when they have been internalized by social actors. Values are said to be internalized when they have been taken over by the actor as his own and when they guide his action choices even in the absence of other persons. Choice is an important aspect of the Parsonian "general theory of action." Given a choice situation, an actor's values influence the way various alternative means and ends will be evaluated and, consequently, the choices which the actor will make.

Values are closely related to goals. The conceptual differences between values and goals may not be immediately apparent. Goals, however, refer to specific ends which are desired, while values refer to more general desired states of affairs. While it is expected that a person will generally be willing to act in ways consistent with his values, such willingness to act is not explicit in the definition of values.

It has been suggested that individuals have a multiplicity of goals. Each social actor also internalizes a multiplicity of values. Some values are much more important to an actor than are others. The values can be said to form a hierarchy of values (53). In situations where values conflict, some must be chosen over others. The values which tend to be selected over others are said to be high in the hierarchy of values. Those which are not selected are lower.

When values are shared by members of a system and are handed on to new members of the system they are part of the culture. (Values in culture are discussed further in the section on culture.)
On the level of social systems, values which are shared by system members contribute to the structure of social action. To the extent that there is consensus on values in a social system, the shared values allow actors to know (to some extent) how their various actions will be evaluated by other persons in the system. (Values in social systems are discussed further in the section on social systems.)

**Beliefs**

A concept which is closely tied to the concept of values is beliefs. Beliefs are ideas that certain objects and phenomena have, have had, or will have certain characteristics and relationships. Jacob and Flink suggest that beliefs are "existential propositions, expressing what human beings consider to be facts..." (45, p. 10). According to Loomis, "...any proposition about any aspect of the universe that is accepted as true may be called a belief" (64, p. 11). Loomis suggests that, while beliefs furnish the cognitive basis for social action, they are seldom purely cognitive (64). They are closely related to values. Beliefs represent what is thought to be true whereas values are standards for evaluation. Myrdal distinguishes between values and beliefs as follows:

People have ideas about how reality is, or was and they have ideas about how it ought to be, or ought to have been. The former we call "beliefs". The latter we call "valuations" (78, p. 1027).

Myrdal continues:

In their "opinions" people express both their beliefs and their valuations. Usually people do not distinguish between what they think they know and what they like or dislike (78, p. 1027).
An actor's values do not develop independently from his beliefs. Nor do beliefs develop independently from values. The two are closely related, both conceptually and in the actual mental processes by which they become a part of the personality system of the actor. Both are internalized from the cultural system by social actors. Identification with significant others is important to the internalization of both beliefs and values.

Beliefs are important to an actor's goals and to his actions since they include ideas about what the world is like. An actor's ideas of what it is possible for him to do are a part of his beliefs. His ideas about his own self, ideas about what he is like as a person and ideas about what others think of him are very important beliefs. They are central to his whole conception of self (e.g., looking glass self, page 17).

Knowledge Beliefs for which there are truth claims (evidence in support of the beliefs) are referred to in this thesis as knowledge. To say that a person knows something (as opposed to simply saying he believes it) is to suggest that the person is able to provide evidence to support what he says he knows. While it could be argued that nothing is ever known absolutely, there can be little doubt that some things can be held to be true with more certainty than others. The degree of certainty depends on the evidence available to support the belief. What is believed on the basis of faith is not accepted in this thesis as knowledge.

An actor can have knowledge of relationships between phenomena
and he can have knowledge of the characteristics of objects. He gains this knowledge as he learns from his experiences.

What a manager of a retail firm, such as a farm machinery dealer, knows depends upon what he has learned from various past experiences and learning opportunities. Since past experiences differ, managers differ in their knowledge. For example, farm machinery dealers differ in how well they know farmers, farming, farm machinery, the farm machinery business and business management in general.

**Sentiments** One of the three aspects of the orientations of actors to situations mentioned on page 11 was the affective aspect. The affective aspect of orientations refers to the feelings of the actor toward objects in the situation. These feelings are sometimes referred to as sentiments (64). Sentiments refer to such feelings as reverence, awe, affection, liking and dislike. They indicate the degree of attachment of the actor to objects. The sentiments of a manager of a retail firm toward his customers and his employees (and vice-versa) are probably important to the success of his business enterprise. They are probably also important in determining how much personal satisfaction he gets from his management activities.

Sentiments are closely related to beliefs and values. What an actor thinks is true about an object, especially as this relates to desired states of affairs, can be expected to influence his feelings toward that object. The implications of the object for goal attainment by the actor are also important to the actor's sentiments toward the object.
Sentiments, beliefs, values, and goals are all closely related to attitudes.

**Attitudes**  The tendency for an individual to act in a given way in given situations, based on his goals, values, beliefs, sentiments and various past experiences is called an attitude. An attitude is a predisposition or readiness to act in a given way toward a given object or category of objects. Examples of objects are physical things, persons, groups, events, actions and relationships. The actor can even be an object to himself and thus can have attitudes toward his own self.

Attitudes vary along four dimensions. They vary in direction, degree, intensity and salience (16; 36). Direction refers to whether the feelings of the actor toward an object are positive or negative. Degree refers to variation along a scale from highly positive (a very favorable attitude toward the object) to highly negative (a very unfavorable attitude toward the object). Intensity refers to how strongly the attitude is held by the actor, to the amount of conviction involved. Salience refers to the relevance of the attitude, to how it relates to action and to other attitudes, to whether it is central or peripheral to the actor's attitude structure.

While it is permissible to speak of goals, values, and beliefs as aspects of cultural systems, social systems and personality systems, attitudes (as defined here) are strictly personality system components. This is because attitudes have a motivational component. They also have cognitive and affective components (80; 99).

Values and beliefs both relate to the cognitive aspect of attitudes.
The predisposition to act in a given way toward a particular object is often largely a result of one's ideas of what it actually is (one's beliefs) and one's ideas of desired states of affairs (one's values).

The affective component of attitudes refers to the feelings of the actor toward the object. The strongest affective attachments of a social actor are probably love and hate feelings toward other persons.

The reference to predisposition in the definition of attitude is a reference to the motivational aspect of an attitude. If an actor has a strong attitude toward an object which is present in a given situation, energy will be mobilized in the actor to enable him to act in some way toward the object. The way he will act will be influenced by his goals and by other factors such as his values, beliefs and sentiments and relevant aspects of the situation itself. One of the factors which distinguishes both values and sentiments from attitudes is that they don't necessarily involve the predisposition to action which is involved in attitudes.

The attitudes of managers of retail firms, along with their goals, values, beliefs and sentiments, are important in determining their orientations in social situations. They influence orientations, actions and outcomes of actions.

**Interpersonal response traits** In addition to their motives, beliefs, values, attitudes, sentiments, etc., individual actors also have characteristic ways to acting in social situations which tend to differentiate them from other individuals. These "...relatively consistent and stable dispositions to respond in distinctive ways to other
persons..." are called "interpersonal response traits" (56, p. 104).

An example of an interpersonal response trait is aggressiveness.

According to Krech, et al.:

Some situations tend to be especially aggression provoking and every individual will display some degree of aggressiveness in them. But the important point is that some individuals show more aggressiveness in a particular situation than do others and may regularly show more in a wide variety of situations. We are led to infer that such characteristic behavior is the expression of a "trait" of aggressiveness in the individual. (56, p. 104)

The definition of interpersonal response traits as relatively consistent and stable dispositions to respond in distinctive ways to other persons is somewhat similar to the definition of an attitude as a predisposition or readiness to act in a given way toward a given object or category of objects. The main distinction between the two is that an attitude pertains to a fairly well defined class of objects (e.g., to a particular person or category of persons) while an interpersonal response trait pertains to people generally (3). A predisposition of an actor to act aggressively only toward a particular person is indicative of a negative attitude toward that person. A predisposition of an actor to act aggressively in all interpersonal activities is a trait.

Interpersonal response traits derive from both constitutional (internal to the organism) and environmental sources (through learning) (23). Aggressiveness, for example, appears to be influenced by the experiences of an actor as well as by constitutional factors. A study by Meyer indicates the influence of parent-child relations on aggressiveness (76).

Aggressiveness is only one of many interpersonal response traits
which influence action and outcomes of action. A listing of interpersonal response traits by Krech, et al., is divided into three categories (56). The categories and traits include: role dispositions (ascendence, dominance, social initiative, and independence); sociometric dispositions (acceptance of others, sociability, friendliness, and sympathetic); expressive dispositions (competitiveness, aggressiveness, self-consciousness, and exhibitionistic). The trait of dominance is closely related to a trait which has received much attention in the literature of social psychology -- authoritarianism (2).

Interpersonal response traits of managers of retail firms, such as friendliness and authoritarianism, have important implications for manager-customer relations and may thus influence economic success of retail firms.

**Intelligence**  Many interpersonal response traits other than those discussed above could have been listed. Numerous traits other than interpersonal response traits could also be listed. According to Morgan:

The unabridged dictionary contains ... about 4,000 words which might be accepted as traits -- such words as humility, sociability, honesty, and forthrightness (77, pp. 214-215).

Obviously, not all of the traits which have implications for success in retail firms can be discussed here. Two traits, other than interpersonal response traits, which are important to actors as they orient themselves to various situations are "breadth of perspective" (124) and creativity (8; 121). Probably the most important (non-interpersonal response) trait for success of retail firms, is
intelligence. According to Berelson and Steiner:

Intelligence is not a single unitary trait. It is composed of a series of specific abilities, but they are positively correlated with each other -- that is to say, they have something in common and hence there is such a thing as general intelligence (8, p. 212).

The following quote, also from Berelson and Steiner, indicates the importance of intelligence:

An exceptionally bright child can expect, on the average, an exceptionally bright future by almost any measure -- including physical and mental health, social adjustment, and occupational success (8, p. 216).

An actor's symbolic skills and his effectiveness in learning, thinking and decision-making are all greatly influenced by his intelligence. The intelligence of a manager of a retail firm, then, has important implications for the success of the business firm he manages.

Symbolic skills, which are greatly dependent upon intelligence, are discussed further below.

**Symbolic skills**  An actor's symbolic skills refer to his ability to manipulate symbols and to use them for purposes of communication. Symbolization is essentially a way of representing phenomena and relationships. Symbolization involves abstraction. The ability to abstract through the use of symbols is among the most important features distinguishing man from lower forms of animal life. Bohlen and Beal (16) consider the ability to deal with abstractions to be a very important indicator of a person's mental ability. The ability to symbolize and to deal with abstractions derives both from the inate mental capacity of the individual and from his learning experiences. Education basically involves a process of learning new symbols and meanings and learning to
operate with symbols in new ways (new to the learner). (Mathematics and symbolic logic, for example, are disciplines which require complex manipulations of abstract symbols.) Actors, thus, differ in their symbolic skills both as a result of their innate potentialities and as a result of their past experiences, including their educations.

Among the most important activities of managers of retail firms are planning and decision-making. Both of these involve selecting from among alternative choices of action. The ability to think not only of alternative courses of action but also to envision the probable outcomes of the courses of action is important to making the decision which will optimize goal attainment for the actor. Symbolic skill is basic here since the alternatives are thought of in terms of symbols and the decision process is a process of manipulation of symbols. Learning, thinking, and decision-making are each considered further in the discussion of individual processes.

**Individual processes** Individual processes refer to processes which take place within individual social actors. The individual processes which are emphasized in this thesis are those which involve mental activity. The number of such processes which could be enumerated is quite large. Only some of the individual processes which are most relevant to this thesis are considered here. These include perceiving, learning, thinking, cognitive-mapping and decision-making. It is not assumed that these processes are all on the same level of complexity or inclusiveness. Nor are they considered to be mutually exclusive. For example, perceiving, learning, thinking and cognitive-mapping are
each involved in and have important implications for decision-making.

Decision-making is considered in more detail than the other processes, since it is considered to be a main function of managers of retail firms. According to Bock, et al., "The major portion of the job of most business executives is to make decisions" (14, p. 4). Abshier and Dahle suggest that, "...the key words are decision-making. As a matter of fact, management's job can be summed up in these two words." (1, p. 43)

Perceiving, learning, thinking and cognitive-mapping are each considered briefly below, then decision-making is discussed.

Perceiving

Perceiving is the process through which actors have sensory experience of their situations. It is the process of being aware of and interpreting objects, qualities, and relationships in the environment. Hartley and Hartley suggest that perception is

...the process by which we register what is in the field of view in a way that is meaningful...all the means of obtaining information and interpreting it according to our concepts of the external world (36, p. 228).

How any given situation is perceived and defined by an actor both influences and is influenced by elements of his own personality system. Perception is selective. What an actor expects to see and what he wants to see in a given situation partly determines what he will see and how he will interpret what he sees. According to Klapper,

Perception is...in part or in whole determined by what individuals want to perceive, have habitually perceived or expect some form of social or physical reward for perceiving (50, pp. 21-22).

Man is not only selective in his perceptual processes he also organizes his perceptions. According to Mead,
Our whole intelligent process seems to lie in the attention which is selective of certain types of stimuli. ... We give our attention to one particular thing. Not only do we open the door to certain stimuli and close it to others, but our attention is an organizing process as well as a selective process. ... Our attention enables us to organize the field in which we are going to act. ... One organism picks out one thing and another picks out a different one, since it is going to act in a different way (73, p. 152).

The attitudes, values, beliefs and self-conceptions of an actor influence what is perceived in any given situation and how it is perceived. They, thus, have important implications for how situations are defined and, consequently, how actors act in situations. An actor's attitudes, beliefs, values and self-conception also tend to be influenced over time by his perceptions. The exposure of an actor to new information is basic to the process of learning.

Learning Learning is an individual process in which experience results in some change in the personality system or in the skills of a social actor. Learning aids individual actors in adapting to recurrent situations. Individuals learn to define situations in appropriate ways. According to Parsons:

Learning is not merely the acquisition of "information" (that is specific items of cognitive orientation) about the properties of the object world; it is also the acquisition of "new patterns of orientation." That is, it involves acquiring new ways of seeing, wanting, and evaluating... (89, p. 12).

Learning, thus, involves more than just the acquisition of information. Two main types of learning, which may be distinguished analytically, include learning information or content and learning skills. The acquisition of language is an important example of learning content. Developing the ability to manipulate symbols effectively (as in
communication) is an example of learning skills.

Individuals may learn already existing content or skills or they may construct and learn something new. Parsons refers to the process by which an individual creates a new pattern of orientation as "invention" (89). According to Parsons:

Invention may be either trial-and-error learning, in which the actor tries new patterns at random until one of them works; or it may be "insight" learning in which the actor constructs a new pattern systematically on the basis of several old ones (89, p. 129).

Learning often involves reciprocal influence among social actors. Two important mechanisms in such learning are imitation and identification (89). In the process of imitation one social actor serves as a model for another. In imitation there isn't necessarily any attachment between the actors. Attachment, however, is important to identification. In identification one individual learns from the other because he likes or respects him.

Identification tends to be more important in the development of values, philosophical outlooks and patterns of orientation, while imitation tends to be more important in the development of knowledge and skills. It should not be concluded, however, that imitation and identification are mutually exclusive. According to Parsons, "the imitative process may be greatly facilitated by its coincidence with identification" (89, p. 130).

Much learning by individuals involves adjusting or adapting to a social environment. Certain things must be learned in each social system of which an actor is a member. Not only must the basic rules,
values and beliefs of social systems be learned but individuals must also learn the role behavior which is appropriate for the positions they occupy in various social systems. From the perspective of the social system, the process in which system members learn what they need to know to operate effectively in the system is referred to as socialization. (Socialization is discussed in the section on social process.)

An important aspect of individual learning in social systems is the internalization of the culture of the system. As was mentioned in the section on values, when the values extant in a social system become functioning parts of an actor's personality (when they become elements of his personality system) then they have been internalized (89). When an actor has internalized cultural patterns of a particular social system he acts in terms of these cultural patterns even when no other system members are present to observe his behavior.

Learning content and learning skills both have important implications for retail firms. It is important for the various employees and the manager of a firm to have knowledge about the product and also to have the knowledge and skills necessary to perform their individual duties. It is especially important for the manager of a retail firm to be able to think reflectively.

Thinking Thinking is a mental process which involves the use of images or symbols. Thinking involves manipulation of mental representations of the external world and relationships in it. Symbols are crucial for thinking. According to Berelson and Steiner:

As we move toward the higher mental processes, we increasingly encounter the notion of images, symbols, and concepts as the
elements of thought: inner representations of things, events, and relationships, or classes of them. ...In essence, man can retain, organize, and manipulate the environment by reference to inner representations that stand for objects or events (8, p. 188).

Berelson and Steiner continue:

Thus, most of the "higher" thought processes (e.g., reasoning as against recalling) employ arbitrary symbols as well as or instead of images and, most frequently, the language(s) of the thinker. In any case, even if the original thought not symbolized in language, it must be verbalized before it can be communicated to others. (By language, we mean both the general language, e.g., English, and the specific language appropriate to the area of thought, e.g., mathematics, psychological terms, etc.) (8, p. 189).

Bohlen and Beal have emphasized the importance of man's symbolic abilities. They point out that through his "ability to deal with abstractions" man can create symbols (16). Man is, thus, able to deal not only with the present but also with the past and with the future. He deals not only with "those things which are real" but also with "those which are possible" (16).

The ability to abstract and to look to the future is an important aspect of what Dewey refers to as "reflective thought." According to Dewey:

...reflective thinking, in distinction from other operations to which we apply the name of thought, involves (1) a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and (2) an act of searching, hunting, inquiring to find material that will resolve the doubt, settle and dispose of the perplexity (25, p. 12).

Reflective thought is characterized by a chain of ideas from some problematic situation to a solution to it. The thinker (actor) carefully examines and scrutinizes the problem and various possibilities which it suggests. The thinker has as his goal the solution of the
perplexity or problem. According to Dewey,

> Demand for solution of a perplexity is the steadying and guiding factor in the entire process of reflection (25, p. 14).

Dewey delineated five phases or aspects of reflective thought which tend to intervene between problem situations and the solution of the problem or perplexity.

In between, as states of thinking, are (1) suggestions, in which the mind leaps forward to a possible solution; (2) an intellectualization of the difficulty or perplexity that has been felt (directly experienced) into a problem to be solved, a question for which the answer must be sought; (3) the use of one suggestion after another as a leading idea, or hypothesis, to initiate or guide observation and other operations in collecting of factual material; (4) the mental elaboration of the idea or supposition as an idea or supposition (reasoning, in the sense in which reasoning is a part, not the whole of inference); and (5) testing the hypothesis by overt or imaginative action (25, pp. 106-107).

The past experiences of the actor (thinker) are important to how he defines problems and to the suggestions he develops as solutions for problems. As Dewey suggests,

> The data at hand cannot supply the solution; they can only suggest it. What, then, are the sources of the suggestion? Clearly, past experience and a fund of relevant knowledge at one's command (25, p. 15).

An actor's relevant knowledge and experiences influence, then, the solutions which he is able to develop for any given problem or perplexity. The solutions which are acceptable to any given actor are also much influenced by his values, beliefs, attitudes and sentiments and by his own self-conception.

Thinking, especially reflective thinking, is a crucial activity for
managers of retail firms. On the individual level decision-making is essentially a process of thinking. And decision-making is at the heart of the role of the manager. The discussion of decision-making follows some comments on cognitive-mapping.

Cognitive-mapping Cognitive-mapping refers to the process in which an individual (consciously or unconsciously) organizes his cognitive elements into a meaningful whole.\(^1\) Cognitive elements include perceptions, images, knowledge, beliefs and values.\(^2\) Whenever anything new is perceived it tends to be perceived in terms of an already existing cognitive map and tends to be integrated in some way into this cognitive map.

To say that there is a process of cognitive-mapping implies that an individual tends to organize (not necessarily consciously) the elements of his personality system. The fact that cognitive elements (knowledge, beliefs, values, etc.) tend to be organized, to form a unified whole, has been emphasized by social scientists (20; 30; 79; 84; 131).

Such terms as "congruity," "balance," "consonance" and "dissonance" have been used to refer to the consistency or lack of consistency among cognitive elements. Writers concerned with the organization of cognitive

\(^{1}\text{The term cognitive-mapping has a more general and somewhat different meaning in this thesis than it has for Parsons (89) and Loomis (64).}\)

\(^{2}\text{The term cognitive elements is also used in a more general way in this thesis than it is sometimes used. Values and goals, along with other elements such as beliefs, are considered to be cognitive elements in this thesis.}\)
elements have generally assumed that actors suffer tension whenever they realize that inconsistent or incongruent cognitive elements are organized together. The actor is then motivated to remove the tension by changing one or both of the incongruent cognitive elements or by convincing himself that they aren't really related to each other (disassociating them).

An actor's actions tend to be consistent with his cognitive elements. Knowledge that one has acted contrary to one's beliefs and values is inconsistent with holding these beliefs and values and tends to arouse tension in the actor. To avoid this tension, actors tend to act in ways which are consistent with their beliefs and values.

The above is not intended to suggest that the mental content of actors is always completely organized and consistent. It, rather, suggests that there is a tendency toward such organization. This tendency is at least partially responsible for relationships between cognitive elements (beliefs, values, etc.) and action. And cognitive-mapping is the process by which cognitive elements are organized.

**Decision-making**

Decision-making is a process which involves making choices among alternatives. According to Johnson, et al.:

...making the decision involves a choice from among alternative plans or actions, with appropriate attention to consequence or pay-offs associated with these alternatives. Making choices requires the use of choice criteria or principles of choice (46, p. 105).

When these choices are made by individual persons, decision-making is an individual process. Individual thought processes are always important in decision-making. When the choice is made jointly by members
of a social system, then communication is also a very important aspect of the decision-making process and decision-making becomes a social as well as an individual process. The decision-making with which this thesis is especially concerned is decision-making which takes place within retail firms and which has implications for the economic success of such firms. In complex business organizations decision-making is a social as well as an individual process. In less complex economic firms, such as small retail firms, the major management decisions tend to be made by a single individual. While social processes (communication) are important in such systems the actual process of making management decisions is largely an individual process.

As conceptualized in this thesis the decision-making process refers to more than just the making of choices. It refers to a more inclusive process. It involves all the activities of the decision maker from the recognition of a problem or opportunity to the actual making of a decision relevant to that problem or opportunity. Decision-making, then, in addition to the making of a choice, also involves recognizing or defining a problem or opportunity, obtaining information relevant to the problem and considering alternative solutions or programs (39). Some social scientists concerned with these various aspects of decision-making have attempted to delineate steps or stages in the decision-making process (1; 26; 46; 63; 82; 127). The stages included by some of these writers are indicated in Table 1. The stages of the adoption process are also included in Table 1 for comparative purposes. (The adoption process is largely a decision process (5; 21).)
Table 1. Some approaches to the delineation of stages of decision-making

<table>
<thead>
<tr>
<th></th>
<th>Johnson, et al. (46)</th>
<th>Wheelock (127)</th>
<th>Drucker (26)</th>
<th>Nielsen (82)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem definition</td>
<td>Felt difficulty leading to problem definition</td>
<td>Defining the problems</td>
<td>Analyzing the problems</td>
<td>Formulation of goals or objectives of the or unit</td>
</tr>
<tr>
<td>Observation</td>
<td>Gathering information about the problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>Recognition of alternative means</td>
<td>Developing alternative solutions</td>
<td>Specification analysis of alternatives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Analysis of alternative means</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision</td>
<td>Choice</td>
<td>Deciding on best solution</td>
<td>Decision-making, choosing the alternatives</td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Action or inaction</td>
<td>Converting the decision into effective action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsibility bearing</td>
<td>Acceptance of responsibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formulation of the goals or objectives of the firm or unit</td>
<td>Recognition of the problem</td>
<td>Definition of the issue</td>
<td>Awareness</td>
<td></td>
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<td>----------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Recognition and definition of an opportunity</td>
<td>Recognition of workable alternatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtaining information, observation of relevant facts</td>
<td>Determination of information needed to appraise the workable alternatives</td>
<td>Analysis of the existing situation</td>
<td>Information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assembly of the information needed to appraise the workable alternatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specification and analysis of alternatives</td>
<td>Evaluation of the alternatives on the basis of projected information</td>
<td>Calculation and delineation of alternatives</td>
<td>Evaluation</td>
<td></td>
</tr>
<tr>
<td>Decision-making, choosing the alternatives</td>
<td>Formulation of the conclusions in terms of action</td>
<td>Choice</td>
<td>Adoption</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authors</th>
<th>Stages of the adoption process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nielson (82)</td>
<td>(6; 62; 95)</td>
</tr>
<tr>
<td>Abshier and Dahle (1)</td>
<td></td>
</tr>
<tr>
<td>Litchfield (63)</td>
<td></td>
</tr>
</tbody>
</table>
The first four stages listed by Johnson, et al., (46) (problem definition, observation, analysis and decision) are included as stages by each of the other writers with one possible exception. No stage for observation or gathering information is explicitly listed by Drucker (26). This stage may, however, be implicit in "analyzing the problems," since such analysis is necessarily in terms of information which is relevant to the problems.

Although there is much consistency among the various approaches, one must not assume that decision-making always proceeds through any given set of stages (e.g. from definition of a problem, to observation, to analysis, to the choice). The various listing of stages are abstract formulations. Any particular decision-making process may be quite different. Stages may be left out or their order may be reversed. A given decision, for instance, might be made purely on the basis of sentiment with very little consideration of alternatives or of the consequences of various alternatives.

Decision-makers differ considerably in the extent to which their decisions involve reflective thinking. They differ in the extent to which their choices are rational. According to Hobbs:

The actor's selection of the most efficient means, from the alternatives available to him, to attain a specified personal goal is considered a rational act with the degree of rationality characteristic of the act being evaluated primarily on the basis of the appropriateness of the actor's choice of means (39, p. 26).

The above quote includes reference to "a specified personal goal" of the actor. If efficiency of attaining the actor's own goals is used as the criterion for rationality then the goals must be known before
rationality can be evaluated. And a decision which is rational for one actor will not necessarily be rational for another if their goals differ. This notion of rationality as the selection of the most efficient means for attainment of personal goals (whatever these goals may be) is different from the notion of "economic rationality." A person is economically rational when his actions are such that they maximize his utility for income). If, however, a person's main goals are economic goals, then economic rationality and rationality in terms of personal goals are identical for him. In a retail firm the rationality of the manager's decisions can be evaluated in terms of their implications for his goals for the business firm (whatever these goals may be).

Decisions will probably be most nearly rational when the decision-maker makes his choice on the basis of a complete definition of the problem, a search for information relevant to the problem, and consideration of a wide range of relevant alternatives. Even when each of these steps is consciously included in the decision process, however, the decision-maker usually won't be completely rational. A decision-maker who is confronted with a complex problem will not have all the information relevant to the problem and will not be able to consider all possible alternatives. Nor will he be able to foresee all of the consequences of a given course of action. His rationality is bounded by his own mental capacity (68; 104) and by the information available. His decision will also be influenced by his ability to put various courses of action into effect. But, while he cannot know all there is to know about any given situation or problem, while he cannot consider all the
alternatives and while he cannot foresee all the consequences, he may still be able to obtain the most relevant information, to consider at least some of the more efficacious alternatives and to foresee at least the most significant consequences. He can also benefit from his past experiences with similar situations and problems.

The decisions which are considered to be of most importance in this thesis are those which have the greatest implications for the attainment of the major goals of a decision-maker or a social system. It is assumed that the choices which are of vital importance in retail firms are those which have implications for the economic success of the business. Numerous choices must be made. According to Phillips the manager of a retail firm:

...is regularly faced with a choice of the most effective sales program, employment policy, credit policy, combination of services to provide his customers, financial structure, pricing policy, inventory policy, expansion program, and many other programs and policies in business (94, p. 20).

The various elements and processes of the personality system which have been discussed (along with the social system, cultural system and physical objects) all have important implications for decision-making. Johnson, et al., state that:

...making the decision is or will be influenced by the manager's value concepts and concepts of what will be and/or is, i.e., by how he sees the problem which in turn determines what he will observe, what variables he will consider and what information he will gather. Further, making the decision is or may be influenced by how the manager analyzes the problem -- by how he relates the variables -- by what alternative plans or actions he considers (46, p. 105).

Decision-making is a form of action and, as such, is functionally
related to personality systems, social systems, cultural systems and physical objects (Figure 1, p. 14 and Figure 2, p. 15). Since the actor's definition of the situation is important to his choices and since the concern here is with decision-making as an individual process, the personality system of the actor is especially important to his decisions. The actor's own knowledge, beliefs, values, and attitudes have important implications not only for the way situations are defined but also for the choices which are made. And it is through their influence on the choices made by the actor that the personality system elements and processes have their greatest effect on economic success.

The social system

The personality system is only one of the systems which influences action and outcomes of action. According to Equation 3 (page 15) social systems are also important determinants of outcomes of actions.

Individual managers of retail firms are involved in numerous social systems on various levels (family, friendship groups, service clubs, fraternal and religious organizations, the retail firm, the community, etc.). The most important type of social system for this thesis is the retail firm (particularly, the farm machinery dealership). A farm machinery dealership may variously be conceptualized as a retail firm, a formal organization, or a social system, depending on the orientation of the person describing it. Each of these ways of conceptualizing the dealership is important to this thesis. Farm machinery dealerships are, herein, treated generally as social systems which are also retail firms. Some special features of farm machinery dealerships, which derive from
the fact that they are also economic firms and formal organizations are also indicated. The most important of these special characteristics are the economic goal orientation and the formal aspects of the structure of the dealership. Following some general comments on social systems, the elements of social systems will be discussed as they relate to the structure of social systems and to the actions and outcomes of actions of social actors, particularly managers of retail firms.

Social system is an abstract concept. It refers to a system of interactive relationships between human individuals. The interaction is structured by such cultural factors as shared symbols, values, and norms and the interaction tends to persist over time. Individuals who are members of a given social sytem are influenced by the orientations and expectations of other actors in that system. According to Parsons:

...a social system consists in a plurality of individual actors interacting with each other in a situation which has at least a physical or environmental aspect, actors who are motivated in terms of a tendency to the "optimization of gratification" and whose relation to their situations, including each other, is defined and mediated in terms of a system of culturally structured and shared symbols (86, pp. 5-6).

This definition has the advantage of indicating something of the relationships of the social system to the personality systems and to the cultural system. An aspect of the definition which is somewhat unusual, however, is the inclusion of the assumption that social actors "...are motivated in terms of a tendency to the "optimization of gratification...""

The following definition of the social system by Loomis is similar to Parsons' definition, except that Loomis doesn't include the assumption
about motivation.

The social system is composed of the patterned interaction of members. It is constituted of the interaction of a 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 (66, p. 2).

In both Parsons' and Loomis' definitions, interaction among system members is important. Interaction and shared symbols and expectations are the key defining characteristics of social systems.

Even though the members of concrete social systems are persons, the person is not usually considered to be the basic unit of social systems. The basic unit is, rather, a status-role. Status-role refers to a position in a social system occupied by a social actor and to the activities and attributes which are expected of incumbents of that given position. (Position and role are discussed further in the section on elements of social systems.)

In a discussion of formal organizations Parsons suggested two points of view from which structure of social systems can be described. These are the "cultural-institutional" point of view "...which uses the values of the system and their institutionalization...as its point of departure" (88, p. 35) and the "group" or "role" point of view"...which takes suborganizations and the roles of individuals participating in the functioning of the organization as its point of departure" (88, pp. 35-36). While structure due to institutionalized cultural patterns and structure due to role patterns have both been important to Parsons, he has tended to emphasize the former somewhat more than the latter. According to Parsons "The main point of reference for analyzing the
structure of any social system is its value pattern" (88, p. 36). This concern for institutionalized value patterns and modes of orientation led Parsons to develop the "pattern variables." The pattern variables are discussed following the discussion of social system elements.

The institutionalized value system and the interconnected roles (the division of labor) were also emphasized by Durkheim (27b). In Durkheim's "mechanical solidarity" institutionalized values were the predominant aspect of structure, while in "organic solidarity" the division of labor (the interconnected system of roles) was most important as a source of solidarity.

A component of structure, which is very important in some social systems, is the communication network. An early exponent of the importance of communication networks was Bernard. For Bernard communication networks were the crucial component of organizational structure (9; 98). Communication networks are considered briefly in the discussion of communication as a social process.

Elements of the social system Social systems have certain basic units or building blocks which are sometimes referred to as elements (64). In this thesis it is assumed that the structure of a social system can be described largely in terms of the elements of the system and the interrelationships among the elements. (It is further assumed that consideration of both structure and processes is essential to complete analysis of social systems.)

Two main approaches to the study of social structure have been indicated. These are the approach in terms of institutionalized culture
and the approach in terms of role patterns (the division of labor). It has already been indicated that position and role are basic units of social systems. They are basic to the role pattern approach to structure. Other basic elements of structure and the type of structure for which they have the most relevance are indicated below:

<table>
<thead>
<tr>
<th>Social system elements</th>
<th>Type of structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beliefs</td>
<td>Structure in terms of institutionalized culture</td>
</tr>
<tr>
<td>Values</td>
<td>Structure in terms of role patterns (the division of labor)</td>
</tr>
<tr>
<td>Goals</td>
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<tr>
<td>Norms</td>
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<td>Positions</td>
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<td>Roles</td>
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<td>Rank</td>
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<td>Sanctions</td>
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<td>Facilities</td>
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</table>

Each of these elements of social systems is considered further in the following pages. Then the pattern variables are discussed. Social processes, including communication, socialization, social control, institutionalization and allocation are considered following the discussion of the pattern variables. Then the functions of management are discussed.

**Beliefs** Individual beliefs were defined previously as ideas that certain objects and phenomena have, have had, or will have certain characteristics and relationships. When beliefs are shared by members of social systems they are important elements of the social system. They influence the way system members orient themselves toward each other, toward objects in their situation and toward other systems.

**Values** Values were defined previously as general ideas
that certain relationships ought to exist between phenomena. Values are basically evaluative since they involve a should or ought component. Some degree of agreement on values is necessary to the stability of social systems (including systems characterized by a complex division of labor). The institutionalization of values is thus an important aspect of the structure of social systems. According to Parsons:

The word institutionalization means both the internalization of common values by members of a collectivity, and also the enunciation of prescriptive or prohibitory role expectations by occupants of responsible roles.

The institutionalization of value-orientation patterns thus constitutes, in the most general sense, the mechanism of integration for social systems. However, social integration does not require a single uniform set of value-orientations equally and universally distributed throughout the social system. Social integration may well include a whole series of subsystems of common value-orientations varying around a basic pattern (89, p. 203).

Among the factors on which agreement among system members is important is the way personnel and resources are to be distributed, what activities are important in the system and what ends are desired. If there is to be concerted activity toward the attainment of any end, that end must be something which is valued by actors in the system or it must be a means to a desired end.

Goals Goals as an element of the personality system were defined as ends which an actor is willing to try to achieve. Goals on the social system level are defined only slightly differently. Goals of social systems are ends which system members are willing to use the resources of the system to try to achieve. The end which is a goal for a social system may be the same as the end which is desired by an
individual social actor. For example, a high volume of sales can be a goal both of a retail firm as a system and of the manager of the firm.

Just as values and goals are closely related on the individual level, they are also closely related on the level of social systems. Attempts to attain a given end will probably not be successful unless that end is valued by at least some system members.

The primacy of goals is a major factor in distinguishing formal organizations from other social systems (88; 98; 123). According to Warren:

...goal primacy is the basic reason for the existence and continued existence of the formal organization. The social structure was deliberately and consciously planned to accomplish certain objectives (123, p. 97).

The primary goal of any organization, according to Parsons, is related to the function performed by that organization. He states:

For the business firm, money return is a primary measure and symbol of success and is thus part of the goal structure of the organization. But it cannot be the primary organization goal because profit-making is not by itself a function on behalf of the society as a system (88, pp. 36-37).

While it is likely that organizational members do see the goals of the organization in relation to the functions of the organization, it is doubtful that their perceptions of the primary goal are always as the above quote from Parsons would indicate. In fact it is quite likely that many would say that the primary goal of the economic firm is to make a profit (rather than to provide goods and services).

The above reference to primary goal is important. It indicates that social systems have a plurality of goals, some of which are more important to system members than are others. According to Simon an
organization has a hierarchy of goals, in which each level is:

...considered as an end relative to the levels below it and as a means relative to the levels above it. Through the hierarchical structure of ends, behavior attains integration and consistency, for each member of a set of behavior alternatives is then weighed in terms of a comprehensive scale of values -- the 'ultimate' ends (104, p. 63).

This points out not only the primacy of some goals relative to others but also the fact of a means-ends schema in which goals can be means to still further goals. This means-end relationship is often exemplified by short-range and long-range goals. Short-range goals are often intermediate steps on the way to long range goals. This is not always the case, however. Short-term goals can also be inconsistent with long-term goals.

Goals differ in specificity as well as primacy (98). Goal attainment will probably be greater where the goals are well defined and are agreed upon by system members. Where goals are only loosely defined there may be no consistent effort toward their attainment. According to Scott:

It should be apparent, then, that to the extent that organizational goals are diffuse or lacking in clarity and to the extent that multiple, possibly conflicting, goals are being pursued, the organization will lack the rational basis for making...critical decisions (98, p. 492).

Goals are of such importance to formal organizations that they are often explicitly stated. Such formally stated goals are referred to as official goals. The goals which are actually pursued by the actions of the organization, however, may not correspond to the official goals. If this is the case the goals which are actually pursued are referred to as unofficial or operative goals (29; 92; 98; 100).
One reason for lack of consistency between official and operative goals is the need for the system to adjust to its environment. Changes in the environment sometimes necessitate changes in goals. Operative goals usually change faster than official goals.

It has been a key assumption of economic theory that economic man is motivated toward the maximization of profit. The following statement by Phillips exemplifies this assumption:

The economic conditions for the most efficient organization in the individual business are usually specified in terms of a single goal -- to make the business as profitable as possible (94, p. 21).

This emphasis on profit and the neglect of other goals has been criticized by some writers concerned with the goals of business firms. Simon, for example, suggests that managers seek to "satisfice" because "...they have not the wits to maximize." (104). Simon points out that decision-makers can't be completely rational. They can never know all there is to know about the situations in which they act nor are they able to visualize all the implications of various courses of action. As was indicated in the section on decision-making, managers are characterized by "bounded rationality" (68; 104).

Some managers probably wouldn't necessarily attempt to maximize profits even if they could. Other goals, such as maintaining a given share of a market, a given rate of growth, or some specified level of profits, may be more important to some decision-makers than is maximization of profits. A listing of goals other than profit maximization is provided by Kohls. The goals include the following:

(1) Expand or grow in size
(2) Maintain or enhance status or power
Some possible goals of economic firms have been mentioned above. The question still remains, however. What are the primary goals of retail firms? In this thesis it is assumed that the primary goal is one of achieving some optimum level of income by providing goods and services for the customers of the firm. What is considered to be an optimum level will vary from one firm to another and will depend to some extent on what the manager is willing and able to invest in terms of time, capital, skills and effort.

Norms Norms are another important element of social systems. They are behavioral standards that specify what is (and what is not) acceptable behavior for social system members in various situations.

Norms provide the stability and orderliness that goes with predictability...they tend to develop concerning anything that is important to members of an interaction group... (81, p. 238).

Norms vary in generality from formally codified and commonly accepted rules to less formal guides for behavior. It has been suggested that, "...some rules can be honored by a rather wide range of conduct while others are more exacting and require a specific line of behavior" (99, p. 465). Thus, norms specify the limits of permissible or required action in particular social situations.
System members conform to the norms of the system for three main reasons. They share the values which support the norms. They have learned to conform and continue to do so from force of habit. Or they conform to avoid being sanctioned for non-conforming behavior.

**Position** A position is a location in a system of social relationships. Positions locate social actors with reference to each other in a social system and with reference to the purposes of the system. An actor who occupies a given position in a social system is a position incumbent. (The manager of a farm machinery dealership is an incumbent of the position of farm machinery dealer.) A social actor is a position incumbent in every social system in which he is involved.

The incumbents of a position in a social system are responsible for the performance of certain functions in the system. This responsibility is specified in the definition of the role which accompanies that position. This relationship between function and position is explicitly recognized by Newcomb:

Every position that continues to be recognized by members of a group contributes in some way to the purposes of the group; this contribution represents its function (81; 325).

Most positions in social systems have names (or titles) and often these names refer to the functions of position incumbents. A farm machinery dealership, for example, will usually have a manager or dealer, a bookkeeper, a partsman, one or more mechanics, and possibly one or more salesman. In a given farm machinery dealership these positions might each be filled by different social actors. In another, a given actor might be an incumbent of more than one of the positions.
At one extreme the dealership might be divided into departments with employees in each department. At the other extreme the dealership might be a one-man operation with one person filling all the positions. The way personnel are allocated to (distributed among) the various positions in social systems and the complexity of the division of labor are important structural features of social systems.

In most social systems persons are differentially allocated to positions. Recruitment of a given actor to a given position results from his possession of specified attributes and abilities (it is on the basis of universalistic criteria). For example the skills needed by mechanics in farm machinery dealerships differ from those which are most important for sales personnel. Occupancy of different positions, however, also has important implications for the personality system and the skills of position incumbents (59; 74). Incumbents of different positions have different experiences and responsibilities and, therefore, they learn different things.

The activities of position incumbents which have implications for the system in general and for other position incumbents in the system are called role behavior. The role behavior which is characteristic of incumbents of a given position specifies the role which corresponds to that position.

Role "A role...consists a whole set of behaviors which are more or less characteristic of all occupants of a position." (79, p. 330). In addition to a set of behaviors, a set of attributes are often also characteristic of incumbents of a given position. What these
behaviors and attributes are related to the function for which the position exists.

All incumbents of a given position will not perform the role corresponding to that position in exactly the same way. There are, however, limits on what behavior is appropriate for incumbents of various positions. Behavior can vary within these limits. The specificity of roles varies from system to system and from position to position. And there may or may not be consensus among system members on what is appropriate behavior for incumbents of a given position. What given actors in a social system consider to be appropriate attributes and activities for position incumbents are their role expectations. The degree of consensus on role expectations is an important aspect of the structure of social systems (34).

The roles in social systems which are oriented toward economic goals are sometimes treated in three main categories (88). These are the roles concerned with formation of policy or decision-making, with "line" functions, and with "staff" functions. The policy formation or decision-making function is performed by the personnel who occupy the top management positions. In small retail firms this is the position of manager. If the manager were not the owner of the business then the owner(s) would also be represented on this level. The main responsibilities on this level involve management and decision-making.

The "line" functions pertain to the various levels of authority below the top management level. While such levels of authority are highly developed in large corporations, their applicability is quite
limited relative to small retail firms.

The staff functions are also not well developed in most small retail firms. In complex organizations the staff usually includes experts whose main responsibility is to advise the managers at the various levels of line authority. Perhaps the closest thing to a staff function in firms like farm machinery dealerships is the manufacturer's representative who often serves in an advisory capacity. The representative, however, is not actually a member of the retail firm as a social system.

The line and staff functions, then, to the extent that they may be distinguished in small retail firms, are usually quite rudimentary. Perhaps a more meaningful distinction for such firms is one between the managerial level and the primary-technical level (87). The managerial level refers, as it did in the above classification, to the basic managerial and decision-making functions. The primary-technical level involves the actual manipulation of the output of the system (the goods and services). In a farm machinery dealership, for example, the main managerial functions are the responsibility of the dealer. The primary-technical functions are mainly the responsibilities of the mechanics, partsman, and sales personnel. As has already been indicated, any given individual can be an incumbent of more than one of these positions. A given individual can, thus, have responsibility on both the managerial and the primary-technical levels. And each position and level has important implications for the other. Substandard performance by incumbents of any position will reduce the probability of attaining the goals of the system.
**Rank**  

Rank refers to the fact that both social actors and positions tend to be placed in hierarchies on the basis of certain criteria. These hierarchial arrangements are referred to as stratification systems, ranking systems, or as hierarchies. The designation of levels of authority in a formal organization is a form of hierarchy. While authority is an important aspect of social structure it is only one of the bases for ranking in social systems. Weber, for example, suggested that there are three main hierarchy systems (125). These include hierarchies of class, status, and power. According to Weber the class ranking was based on access to the means of production and acquisition of goods. Status referred to honor or prestige and was represented by consumption of goods and "style of life." The third ranking system according to Weber was in terms of power. Weber defined power as:

...the chance of a man or of a number of men to realize their own will in a communal action even against the resistance of others who are participating in the action (125, p. 180).

Of these three systems of ranking, Marx emphasized class distinctions based on access to means of production, Veblin (119) emphasized the status distinction based on style of life, and Weber (125; 126), himself, appeared to be most interested in relationships of social power. While it is possible to distinguish analytically between class, status, and power as Weber has done, they are closely interrelated and tend to vary together.

One of the important features of complex organizations, the hierarchy of authority, is generally considered to be a component of power (17; 66). According to Loomis:
Power is the capacity to control others. It has many components which may be classified as authoritative and non-authoritative control. Authority is the right as determined by the members of the social system and built into the status-role to control others, whereas unlegitimized coercion and voluntary influence are nonauthoritative. Influence may rest on personal characteristics, social capital, and many other bases (66, p. 13).

In most retail firms the manager has the most power and has control over the authority structure. This authority derives from his ownership of the business (or from his appointment as manager by the owners). Although he controls the authority structure, effectiveness of a manager in attaining his goals will probably be increased if he also uses informal influence as a means of motivating employees.

Rank is not only a characteristic of positions; it is also a form of sanction. High rank is usually rewarding while low rank is, in some senses, a penalty (for lacking the "proper" attributes or achievements). Sanctions are considered further below.

Sanctions Activity by social actors which is in conformity with the values and norms of the social system tends to be rewarded by other system members. Deviant behavior tends to be punished. Rewards are positive sanctions while punishments are negative sanctions.

Rewards function mainly as sources of motivation and punishments function mainly as means of social control. Approval is an important reward and disapproval is an important negative sanction for most social actors. The importance of approval as sanction follows from the

Sociologists have been sharply criticized by Wrong (129) for over-emphasizing the importance of approval and "approval-seeking." While it is obvious that there are limits on the extent to which man is motivated by the desire for approval, there can be little doubt that approval and disapproval are important social sanctions.
importance of the need for response and the need for recognition (see page 21).

Rewards are closely related to facilities. Rewards are, thus, considered further in the following discussion of facilities.

**Facilities** Rewards have gratificational significance and are usually identified with ends rather than means. Facilities, in contrast, have instrumental significance and are means to ends. According to Parsons:

Facilities are the objects of orientation which are actually or potentially of instrumental significance in the fulfillment of role-expectations. They may consist of physical objects, but not necessarily (89, p. 199).

Whether an object is a facility or not is mainly a function of its significance for actors in the social system. Any given object can function either as a facility or a reward or as both depending upon how it is defined by system members.

Facilities are closely related to roles in social systems since they (facilities) are used by position incumbents as they perform their roles. Physical and capital resources in land, plant and equipment are important facilities for most retail firms. The manager's own specialized knowledge of the product line and his technical skills are also important facilities, as is his authority within the system. The activities of employees of the firm are also planned in such a way as to facilitate the achievement of system goals.

It was suggested above that a given object may have significance both as a facility and as a reward. A facility is especially likely to have reward value if it is scarce and if it is a means to a variety of
highly valued ends. As Parsons suggests, "there is a tendency for par­
ticular facilities to acquire reward value" (89, p. 202). Money and
power are important examples of this. Money, as a medium of exchange,
provides the actor who possesses it with access to a wide range of goods
and services. It can be used to purchase either objects which function
primarily as facilities or it can be used to purchase objects which have
mainly gratificational significance. As a means to these ends money is
a facility. It is not surprising, however, for something which provides
access to a very wide range of rewards to also take on gratificational
significance itself.

This is not the only reason why money is valued. Money also tends
to be valued as evidence of achievement (57; 89). According to Parsons:

...the way in which income and power are integrated into
systems of instrumental orientation makes it inevitable
that they should be valued; the possession of anything
valued -- the more so if comparison with others is, as
it must be, involved -- is a source of prestige. The
acquisition, then, can become a goal of action and suc­
cess in acquisition a measure of achievement. Finally,
the man with money or power is valued not only for want
he has done but for what he can do, because possession of
generalized facilities widens the range of capacity for
achievement. Thus the status of money and power as rewards
goes back fundamentally to the valuation of achievement
and to their acceptance as symbols of achievement, whether
actual or potential (89, p. 202).

Thus money and power are important not only as facilities but also
as rewards for superior attributes or achievements.

The facilities and rewards which are important in a social system
and the way they are allocated to positions in the system are important
structural features of that social system. The facilities which are
used and how effectively they are used also have important implications
for goal attainment by the system.

The pattern variables  The pattern variables are not considered to be elements of personality or social systems in this thesis. They refer, rather, to ways in which actors orient themselves to situations. The goals, beliefs and values which prevail in a social system influence what types of orientations are considered appropriate in various social situations. According to Parsons there are five dichotomous choices which must be made by actors in orienting themselves to situations. These choices are called the pattern variables (86; 89; 90; 91). The pattern variables have implications for all three levels of systems (personality systems, social systems, culture). On the personality system level they are habits of choice and they tend to be internalized from the culture. On the social system level they are aspects of role definitions and on the cultural level they are aspects of value standards (89).

If system members agree on which choices are appropriate in given situations the system can be expected to function more smoothly and effectively than if opposing choices are valued by system members. Usually the choices which are valued are those which are consistent with the beliefs and values prevailing the system. They are those which are most appropriate to the ends which the system is attempting to attain.

The five choices (pattern variables) are as follows:

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<th>Affective neutrality</th>
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<tbody>
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<td>Particularism</td>
<td>-</td>
<td>Universalism</td>
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<tr>
<td>Ascription</td>
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<td>Achievement</td>
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<td>Diffuseness</td>
<td>-</td>
<td>Specificity</td>
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<td>Collectivity orientation</td>
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<td>Self orientation (89)</td>
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Affectivity versus affective neutrality refers to the necessity of choosing in any situation whether or not sentiment is appropriate in the situation. In terms of an actor's orientation toward another actor it is the decision whether to treat the other as an end in himself or as a means to an end (instrumentally). If the goal of a given retail firm is to maximize income, then the affective neutrality choice is probably more appropriate for the manager than is a choice of affectivity. Complete affective-neutrality, however, (if such were possible) would probably not be desired since employees and customers might resent the "coldness" of the manager.

Particularism versus universalism refers to whether the object toward which the actor is acting should be evaluated in terms of its relation to the actor or in terms of objective criteria. The universalism choice is probably more consistent with the goals of retail firms than is the particularism choice. For example, a manager would probably be ahead financially to select employees in terms of their qualifications for the job than on the basis of family or friendship ties.

Ascription versus achievement refers to whether social objects are to be evaluated on the basis of what they are or what they have achieved. The achievement choice is probably most appropriate to retail firms. For example, it is probably more important in machinery dealerships to select mechanics on the basis of the mechanical skills they have learned than on the basis of the status of their family.

Diffuseness versus specificity refers to the scope of the relationship with the social object. A friendship is an example of a diffuse
relationship. The obligations, rights and privileges of the actors are not limited to a specific area. They are quite general and involve many aspects of day to day life. By comparison relationships in retail firms tend to be somewhat more specific. They center around technical and economic activities.

Collectivity orientation versus self orientation refers to whether an act has significance for the system as a whole or has personal significance. Most of the activities of managers and employees of retail firms have significance for the goals of the firms as systems. It is doubtful that employees of retail firms are oriented toward system goals to the extent that the managers are. Perhaps one reason why managers may be more concerned with the goals of the business than are the employees, is that for the manager the system and personal goals tend to coincide. High income for the firm is usually translatable into high income for the manager.

Four of the pattern variables above correspond to aspects of the Gemeinschaft-Gesellschaft typology. In fact this typology was the source of some of the pattern variables (91). The Gemeinschaft-Gesellschaft typology was originally developed by Toennies (112). The Gemeinschaft-Gesellschaft typology has been refined and applied to concrete social systems by Loomis (64; 65). According to Loomis' formulation (112) social systems can range on a continuum from Gemeinschaft to Gesellschaft on six basic criteria. The first four are similar to pattern variables discussed above. The six criteria are:
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<tr>
<td>1. Affectivity</td>
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<tr>
<td>2. Particularism</td>
<td>Universalism</td>
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<td>3. Ascription</td>
<td>Achievement</td>
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<tr>
<td>4. Diffuseness</td>
<td>Specificity</td>
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<tr>
<td>5. Traditional</td>
<td>Rational</td>
</tr>
<tr>
<td>6. Familistic</td>
<td>Contractual</td>
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The fifth criterion (traditional-rational) is one which was also emphasized by Weber (126).

The main point to be made in reference to the pattern variables and to the Gemeinschaft-Gesellschaft typology is that retail firms can be expected to be characterized by Gesellschaft-like relations. The extent to which the manager and the employees of the firm tend to value Gemeinschaft rather than Gesellschaft relations or tend to lack consensus on what type of relations is appropriate may limit the economic success of the business.

**Social processes** Social processes are processes which involve interaction among social actors. These are processes which take place within social systems rather than within individual personality systems. For a process to be a social process it must involve activity of two or more individuals. The number of social processes which could be listed and discussed is quite large. Only certain processes, which are considered to be essential to the conceptual framework of this thesis, are discussed here. These include communication (and interaction), socialization, social control, institutionalization, and allocation. Each of these processes has been emphasized by Parsons (86; 89). Four of these processes (communication, socialization, social control and
institutionalization) are considered to be "comprehensive or master processes" by Loomis (64; 66). Two other "comprehensive or master processes", which are not discussed in this thesis, are boundary maintenance and systemic linkage. According to Loomis boundary maintenance "...is the process whereby the identity of the social system is preserved and the characteristic interaction pattern maintained" (64, p. 31). Systemic linkage is:

...the process whereby one or more of the elements of at least two social systems is articulated in such a manner that the two systems in some ways and on some occasions may be viewed as a single unit (64, p. 32).

The discussion of communication, socialization, social control, institutionalization and allocation is followed by some comments on the functions of management. Communication, social control, and allocation are all very important processes in the management of economic firms.

Communication and interaction Communication and interaction are the most basic of the social processes. Social life depends upon the ability of individuals to interact meaningfully with each other through the use of gestures or symbols. The relatively high frequency of interaction among system members is a defining characteristic of social systems. As Loomis suggests, "the social system is composed of the patterned interaction of members. It is constituted of the interaction of a plurality of individual actors..." (66).

Interaction is the process through which system members influence each other. According to Sorokin interaction is "...any event by which
one party tangibly influences the overt action or state of mind of the other" (107, p. 40). Interaction usually involves transfer of meaning.

Communication is interaction which has as its purpose the transfer of meaning from a sender to a receiver. A communication event may involve the transfer of a variety of meanings or messages. These range from complex scientific discourses to the transfer of sentiment. According to Loomis:

Communication is the process by which information, decisions, and directives are transmitted among actors and the ways in which knowledge, opinions, and attitudes are formed or modified by interaction (64).

Communication is important not only as a social process. Patterns of communication are also important aspects of social structure (9; 98). Over time communication in social systems tends to become patterned with messages flowing more frequently between certain system members than others. The patterns composed of various lines or channels of communication are referred to as communication networks. Social systems vary in the extent to which lines of communication and communication networks are formalized. In some social systems communication is informal and not highly structured. In large, highly complex social systems communication tends to be formalized and the lines of communication are important structural features.

Both formal and informal communication networks have important implications for formal organizations. According to Bernard communication networks are of vital importance in formal organizations (9). Scott suggests that:

It is clear that Bernard viewed communication networks, carrying their freight of information, influence, and
inducements, as the crucial components of organization structure (98, pp. 501-502).

Communication networks tend to be less formalized in comparatively less complex organizations, such as small retail firms, than in more complex systems. Even among such firms, however, there is much variance in the complexity and effectiveness of communication networks. Both communication among position incumbents in a retail firm and with persons outside the firm have implications for economic success of the firms.

According to Phillips (94) effective communication is necessary for effective management. The importance of communication for the various functions of management is discussed in the section on management functions.

Socialization Socialization is the process in which individuals learn to function as members of social systems. According to Merton:

...socialization designates the process by which people selectively acquire the values and attitudes, the interests, skills, and knowledge -- in short, the culture -- current in the groups of which they are, or seek to become, a member. It refers to the learning of social roles (75, p. 287).

Loomis states that:

Through socialization each newborn baby learns the skills, beliefs, ends, and norms of the society into which he is born; he internalizes the interaction and expectancy patterns which make status-roles and the elements of power and rank operative in society. The interaction involved in the process of socialization results in the formation of the personality (64, p. 34).

Like most social processes, socialization can be viewed from the point of view of the individual or from the point of view of the social
system. For the individual, socialization is a learning and a development process. The individual learns to perform social roles, internalizes culture and develops a self-conception. For the social system, socialization is the process by which culture is transmitted and social positions are filled. A system can function effectively only if new members learn what is expected of them. Since socialization is largely a process of reciprocal influence among system members, communication is a very important process in socialization. System members influence each other largely through the communication of messages and sentiments.

**Social control** Social control refers to the process of assuring conformity with system values and norms through the threat or actual use of negative sanctions. It was suggested on a previous page that "...norms specify the limits of permissible or required action in particular social situations". Social control is a process of keeping behavior within these limits. According to Shibutani:

Social control refers to keeping behavior within the bounds of group expectations, and in the last analysis this rests upon consensus (103, p. 60).

Shibutani continues:

Even those who are physically alone often take into account what the reactions of other people are likely to be if they should find out about what he is doing. Social control refers to the fact that human behavior is organized in response to expectations that are imputed to other people. This does not necessarily involve coercion; various constraints are placed upon the things men do by virtue of their participation in groups (103, pp. 60-61).

Negative sanctions are an important element of social control. The threat of sanctions (rather than use of the sanctions themselves) is often sufficient to assure conformity.
Social control is closely related to socialization. Both have important implications for the stability of social systems. Both tend to promote conformity to system norms. Socialization supplies actors with internal constraints. Social control is effective mainly due to external constraints.

Social control is important in retail firms as a way of assuring behavior which is consistent with the goals of the firms. The use of motivational techniques is also a means of encouraging behavior consistent with system norms. Social sanctions (e.g. giving or withdrawing approval), economic sanctions (e.g. giving or not giving a raise), and, at the extreme, the treat of expulsion from the system (firing the employee) are among the sanctions which a manager has at his disposal.

Institutionalization

Institutionalization is the process by which social systems develop structure. Institutionalization results in the patterning of social relationships. According to Parsons:

...institutionalization is an articulation or integration of the actions of a plurality of actors in a specific type of situation in which the various actors accept jointly a set of harmonious rules regarding goals and procedures (89, p. 194).

Parsons also states that:

...actions are said to be institutionalized if the actors expect them to occur and there are cultural sanctions opposing nonconformity with expectations (89, p. 40).

Activity which is institutionalized tends to be carried on in a characteristic way. Patterns of behavior develop and actors tend to share expectations for behavior in various situations. An element of culture (e.g. a value or a norm) is institutionalized in a social system
if it is commonly accepted by system members and activity tends to be patterned on the basis of it. Institutionalized values are a basic feature of the structure of social systems (88).

**Allocation**

Allocation is the process in which personnel, facilities and rewards are distributed among the positions in a social system. (Or, from a different perspective, allocation is the process in which positions and roles, facilities and rewards are distributed among the members of a social system.) Some form of allocation of personnel to positions is imperative in complex systems which have differentiated roles (division of labor).

If it is assumed that the positions and roles in a social system correspond to functions in the system then it is important for the functions associated with each position and role to be the responsibility of at least one system member. This assignment of responsibility for roles (the allocation of personnel to positions) is an important allocative process. If a position incumbent is to perform his role effectively he must have the necessary facilities at his disposal. Thus, the allocation of facilities is also an important allocative process. The allocation of rewards is also important as a means of motivating activity which is consistent with the goals of the system.

The actual process of allocation of personnel, facilities, and rewards differs from one system to another. The allocation of system members to social positions, for example, might be on the basis of appointment, election or some form of competitive endeavor. In retail firms personnel are usually hired by the manager to fill certain
positions. The hiring is done, at least to some extent, on the basis of universalistic criteria.

One of the management functions (organizing) is largely concerned with allocative problems.

Management functions The management functions involve both individual and social processes. To the extent that they involve processes which take place within personality systems they are individual processes. When they involve interaction among system members they are social. In complex organizations all of the management functions involve social processes (especially communication). In less complex social systems, such as retail firms, the functions tend to be the responsibility of a particular individual (the manager) but they still involve social processes, at least to some extent.

Skill in five main areas of management is very important to the success of managers of retail firms. The five areas of management include planning, organizing, directing, coordinating and controlling (1; 94).

Each of these five aspects of the role of the manager are closely tied to decision-making. According to Abshier and Dahle:

All of the functions of management planning, organizing, directing, coordinating and controlling have as their objective the making of a decision and seeing that the decision is put into an action program (1, p. 43).

Planning, however, involves the decision-making process more than any of the other of the management functions. Planning involves the selection and development of future courses of action. According to Phillips:
...planning involves more than making decisions for the business. It involves looking ahead and appraising in anticipation of the decision. It leads to a decision not only as to what action will be taken, but also when and where to take the action, and how to go about taking it (94, p. 9).

Setting goals and deciding how to achieve them is an important aspect of planning. The availability of information is important to effective planning by management.

Organizing refers to the way the resources of the system (human and other) are allocated and combined to satisfy the goals of the system. In a complex formal system, organization of human resources is described by the organizational chart. In small retail firms organization is usually less formal.

Directing refers to the activity of the manager in guiding and motivating system members. Directing is mainly a leadership function (94).

Coordinating refers to the necessity for various activities and processes within the system to form a unified effort.

Controlling is the supervisory function of management to assure satisfactory performance in all phases of operations (94). It is the manager's responsibility to see that the various position incumbents perform their roles adequately. Controlling involves the process of social control.

Communication is an important process in each of the five areas of management. Communication is especially important if the manager is to effectively coordinate activities in the business. According to Phillips:
Effective internal communication is one of the biggest secrets to coordination. The rule of three way communications -- (1) up from employees to management, (2) down from management to employees, and (3) across between employees and departments at all levels -- is prerequisite to effective coordination (94, p. 10).

Communication is also basic to the areas of planning, directing, and controlling. Even when the manager alone assumes responsibility for planning and decision-making, communication is still of vital importance since the manager needs to obtain information about various aspects of the business from employees and other sources.

All of the social processes as well as the management functions have implications for the success of retail firms. The extent to which they effectively contribute to the attainment of the goals of a given firm depends to a great extent on the personality system and the skills of the manager.

The culture

Culture systems are fundamentally different from personality systems and social systems. Personality systems and social systems are action systems while culture systems are not. As Parsons suggests, the culture system does not act; it just "is" (89). Culture systems also differ from personality systems in their longevity. Both social systems and culture change over time but, in general, their "life span" is much greater than is that of any one individual.

Culture tends to be cumulative (especially in terms of science and technology). Each generation of actors in a social system has access, not only to the previous contributions to their own culture,
but, also, through diffusion, to those at other cultural systems as well.

Culture has been defined in varying ways by social scientists. According to Tylor:

Culture...is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society (114, p. 18).

According to Malinowski culture "comprises inherited artifacts, goods, technical processes, ideas, habits, and values" (67, p. 41).

Kluckhohn has suggested that American anthropologists tend to include in culture "...those aspects of the total human environment, tangible and intangible, which have been created by men" (51, p. 49).

These definitions from cultural anthropology indicate generally the meaning of the term culture as it is used in this thesis. In one sense, however, the term culture is used more specifically in this thesis. That is with respect to physical objects. Concrete physical objects are not considered here to be a part of culture. They are considered to be indications of culture and even embodiments of culture. But they are not considered to be cultural objects.

Architecture provides an example of this distinction between physical and cultural objects. The architectural style of a building is cultural while the actual physical structure is a physical object. A great deal can be inferred about the culture from the physical object but the physical object and the culture are not the same. Another example is a farm tractor. An actual tractor is a physical, rather than a cultural, object. From it, however, one can infer a great deal about
the level of technology in the society where it was produced.

This distinction between physical objects and cultural objects is based on Parsons' contention that, "Cultural objects...are distinguished from physical objects in that the former are subject to "internalization," the latter are not" (89, p. 99).

While the culture system is not an action system it does have important implications for action, both in directing action and as an object of the situation. According to Parsons:

"...whatever its systematic form, a cultural pattern may be involved in action either as an object of the actor's situation or it may be internalized to become part of the structure of his personality. All types of cultural patterns may be internalized, but particular importance is attributed to the internalization of value orientations (89, p. 221).

The fact that values and beliefs are internalized by individual social actors and institutionalized in social systems has already been indicated in this thesis. These and other cultural elements are considered somewhat further in the following pages.

Symbols and language are basic components of culture (just as communication is a basic process in social systems). The existence of complex social systems would clearly be impossible without shared symbolic systems.

Two general categories of cultural objects which are important to this thesis include systems of value standards and systems of ideas, beliefs and knowledge. Since all elements of culture (as culture is delineated three major classes of culture patterns:

1. Systems of ideas or beliefs
2. Systems of expressive symbols
defined in this thesis) can be internalized by social actors and institutionalized in social systems, most of the elements of culture, which are most relevant to this thesis, have already been discussed in the sections on the personality system and the social system. Because of this, systems of value standards and systems of ideas, beliefs and knowledge are discussed only briefly here.

**Systems of value standards** Systems of value standards include such elements as values, goals, role expectations and norms. These function mainly as evaluative standards.

According to Kluckhohn values vary along several dimensions (52). One of these dimensions is the dimension of generality. Some values pertain specifically to certain situations and to certain types of activities. Values which pertain specifically to a given position in the social system are important to role expectations. Other values are quite general and are applicable throughout the social system. Values also vary in how strongly they are held (their intensity). According to Kluckhohn some values are categorical values (52). These are values which are very important to system members. They tend to be accompanied by norms which specify that given behaviors "must" or "must not" occur. Violation of these norms is severely sanctioned. They tend to have been in the culture a long time and their appropriateness is seldom questioned. Other values are preferential values. Preferential values pertain to states of affairs which tend to be valued more highly than are other states of affairs. Preferential values aren't as strongly held as are categorical values. Activity which is
contrary to such preferential values is disapproved of but not severely sanctioned. In general, the norms which are linked to preferential values correspond to Summer's folkways, while norms based on categorial values correspond to mores (109).

Values vary in explicitness. According to Kluckhohn:

In general, an explicit value is one which is stated verbally by actors, whereas an implicit value is one which is inferred by observers from recurrent trends in behavior, including verbal behavior (52, p. 415).

Both the explicit and implicit aspects of culture are important aspects of an actor's situation.

Values also vary in the extent to which they are shared by system members. To be an important aspect of culture a value must be shared at least to some extent. Purely idiosyncratic values (values held by only one person in a social system) may have important implications for the stability of the system but they are not part of the culture of that system.

Values tend to be organized. While actors in a given social system probably share many of the same values, the particular values held by an actor and the way these values are organized by each actor probably differ. Each has his own unique value system. Thus, "...the group value system is an abstraction, a statement of central tendencies in a range of concrete variation" (52, p. 416).

Values as an element of culture are not completely static. While the categorical values tend to persist for many generations they are subject to gradual change. Preferential values change more rapidly. Kluckhohn suggests that, "New values come into being as a result of
individual variability and new situations" (52, p. 416).

On the culture system level the pattern variables are aspects of value standards (89). As such, they tend to be culturally approved choices for the dilemmas of action.

**Systems of ideas, beliefs and knowledge** Systems of ideas, beliefs and knowledge include those aspects of culture which have primarily cognitive rather than evaluative or affective significance when they have been internalized by social actors. Beliefs are ideas that certain objects and phenomena have, have had, or will have certain characteristics or relationships. Beliefs are elements of cultural systems when they tend to be transmitted from one generation to another and to be commonly shared by members of succeeding generations. There is no assurance that beliefs are factual. They may even be contrary to fact. If, however, social actors think they are true then they are beliefs. And the actors act as if they are true (111).

Beliefs which are supported by objective evidence are called knowledge. Cultural systems include complex systems of theory and knowledge, such as science and technology. Science and technology have important implications for social action and for outcomes of action. The extent to which farm machinery dealers, for example, are cognizant of recent developments in science and technology which relate to farming and to farm machinery has implications for their economic success.
Physical objects

As has already been indicated, the situation which is relevant to any given social action and outcome of action includes both social and non-social objects. Personality systems and social systems are important social objects. Non-social objects include cultural objects and physical objects.

Human individuals are considered to be social objects rather than physical objects even though the organism itself is a physical entity. The physical aspect of the human individual (the organism) has already been mentioned as an aspect of the personality system. Physical objects here refer to non-human objects, both inorganic and organic. Physical objects are relevant to social action and to outcomes of action when they function as facilities, rewards or obstacles. As was indicated in the section on social systems, objects are facilities when their main significance is instrumental. When objects are used by actors in the performance of their roles, they are facilities. Objects are rewards when they function mainly as sources of gratification. Objects function as obstacles when they in some way impede or restrict activity.

According to Parsons:

Physical objects are those objects which are located in space and time; which do not "interact" with the actor-subject, as other actors do; and which constitute only objects, not subjects, of...orientation. Thus they can constitute instrumentally significant means, conditions, goal objects, obstacles or significant symbols (89, p. 59).

Physical objects over which actors have exclusive rights are referred to as possessions. It is possible to distinguish analytically between the objects, themselves, and the rights to them. The objects
are physical while the rights to the objects are social and cultural. Possession of objects, then, rests on social conventions.

Physical objects which function as facilities are very important in firms like farm machinery dealerships. The physical plant, the equipment and the inventory of saleable goods are all important physical objects in farm machinery dealerships. And all are necessary to the performance of various roles in the dealerships. For example, the tools which are available to mechanics will influence their ability to work efficiently and effectively in repairing complex machinery.

In recent years the equipment used by farm machinery dealerships has become more complex. And, as was indicated in the introduction to this thesis, the products sold by farm machinery dealerships have also tended to become not only much more complex but also larger and more costly. The quality of products sold as well as the ability to provide adequate service on complex machinery have important implications for the success of farm machinery dealers. The products sold by any given retail firm and the services provided must be adapted to the needs and desires of the customers of that firm. They must be up to date and they must be adapted to the locality.

Summary of the Conceptual Framework

In the preceding pages the conceptual framework of this thesis was presented. Some highlights of this framework are presented below.

The concern of this thesis is with action and outcomes of action
in retail firms. An outcome of action is a function both of the action of an actor and the situation in which he acts. Human individuals (actors) seldom simply respond to stimuli. They have orientations toward the situations in which they act and they act in terms of their definitions of these situations. The personality of the actor, therefore, influences his actions. The relationship between the personality of the actor, the situation in which he acts, the action and outcomes of action can be expressed as follows:

- **Personality**
- **Situation**
- **Action**

This can be expressed in equation form:

\[
\text{Outcome of Action} = f(\text{Personality} \cdot \text{Situation}).
\]

(Equation 2, p. 14)

Action is assumed to intervene between the personality and the situation and outcomes of action.

The situation can be analytically divided into social and non-social components. These components can be further divided into personality systems and social systems (social objects) and culture and physical objects (non-social objects). Equation 3 follows from this:

\[
\text{Outcome of Action} = f[\text{Personality of Actor (the manager)} \cdot \text{Other Personality Systems. Social Success} \cdot \text{Social Systems. Culture. Physical Objects}].
\]

(Equation 3, p. 15)
Equation 3 indicates that personality systems, social systems, culture and physical objects are all important to outcomes of action. Each of these was discussed in the conceptual framework. The personality system and the social system were emphasized. Elements and processes of personality systems and elements and processes of social systems were delineated and discussed. The personality system elements which were discussed include: needs; wants, wishes, desires; goals; values; beliefs; knowledge; sentiments; attitudes; interpersonal response traits; intelligence; and symbolic skills. The individual processes include: perceiving, learning, thinking, cognitive mapping and decision-making. The social system elements include elements which pertain to structure in terms of institutionalized culture (goals, values, beliefs and norms) and elements which pertain to the division of labor (position, role, rank, sanctions and facilities). The social system processes which were discussed include communication and interaction, socialization, social control, institutionalization and allocation. Two main components of culture which were delineated are systems of value standards and systems of ideas, beliefs and knowledge. The main concepts in the conceptual framework are listed in Figure 4.

Not all of the concepts in Figure 4 were operationalized for this thesis. Operationalizing all the concepts and testing all the relationships implied in the conceptual framework is beyond the scope of any one study. The conceptual framework as summarized in Figure 4 is intended to be general enough to be applicable to a wide range of problems of retail firms. The generality of the framework is due to Objective 2
Figure 4. A paradigm of some important variables for the analysis of action and outcomes of action in retail firms.
of this thesis: To develop a conceptual framework which is relevant not only to economic success but also to a wide range of problems of retail firms.

Only a portion of the concepts which have important implications for economic success were operationalized for this thesis. The data used in this thesis were gathered before this conceptual framework was developed. The hypotheses which were developed and the concepts which were operationalized were limited by the data. The data are from a study of farm machinery dealers in Iowa (the study will be discussed further in the methodology chapter). Although data were not available in the field study to test many relevant hypotheses which might have been developed, the study does contain measures of personality and social system variables and of certain activities of farm machinery dealers which can be tested for relationships with economic success.

The concepts for which operational measures were developed for this thesis are indicated by asterisks in Figure 4. Beliefs, values, beliefs, values,

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1 This thesis is ex post facto since the data used to test the hypotheses were gathered prior to the development of the hypotheses. The data, however, were not analyzed in such a way as to test the hypotheses until after the hypotheses were developed.

2 The data provided by the field study are assumed to be adequate for purposes of this thesis. They provide specific data on relationships between certain variables and economic success. They provide information relative to both the practical level concern and the theoretical level concern of this thesis. The conceptual framework suggests other relationships which can be examined in future studies.
and goals were operationalized as cognitive elements.\footnote{As was indicated on page 40, the term cognitive elements is used in a more general way in this thesis than it is sometimes used. Values and goals, along with other elements such as beliefs, are considered to be cognitive elements in this thesis.} Three aspects of facilities and resources were measured. No attempt was made to completely operationalize the decision-making process but certain activities of managers of retail firms which have implications for decision-making were measured.

The propositions and hypotheses which were derived from the conceptual framework are indicated in the following chapter.
THE THEORETICAL PROPOSITIONS AND THE HYPOTHESES

(APPLICATION OF THE CONCEPTUAL FRAMEWORK TO THE PROBLEM
OF DIFFERENTIAL ECONOMIC SUCCESS AMONG RETAIL FIRMS)

Three levels of propositions are presented in this chapter. The propositions on the first level are called theoretical propositions. These theoretical propositions were derived from Equation 3 (page 15 and 85) and from Figure 1 (page 14 and 85). They are very general and are not necessarily hypothetical, since there is little doubt of their truth. The level of the theoretical propositions is such that they could be referred to as postulates. These propositions are important not so much for what they say as for what they imply and for the questions they raise. General hypotheses were derived from these theoretical propositions. And specific hypotheses were derived from the general hypotheses. The specific hypotheses state specific relationships (direction predicted) between specific personality system, social system, and action variables and economic success of farm machinery dealerships.

As was mentioned in the summary of the previous chapter the data used in this thesis were collected from farm machinery dealers and pertain to these dealers and their business enterprises. The specific hypotheses presented in this chapter are those for which data were available in the farm machinery data.
The Personality System

The first theoretical proposition pertains to the relationship between personality systems and economic success of retail firms. The proposition was derived directly from Equation 3 which is repeated here from page 15:

\[
\text{Outcome of Action (e.g., Economic Success)} = f \left[ \text{Personality of Actor (the manager), Other Personality Systems, Social Systems, Cultural System, Physical Objects} \right].
\]

The first functional factor of Equation 3 indicates that an outcome of action (e.g., economic success) is partially a function of the personality system of the actor. Theoretical Proposition 1 follows from this:

**Theoretical Proposition 1.** Personality systems of managers of retail firms are related to the economic success of the firms they manage.

This proposition suggests very little about the nature of the relationship. The main function of Theoretical Proposition 1 is to point out that personality system variables are among the variables which might be considered by anyone concerned with economic success of retail firms. The section on the personality system in the conceptual framework indicates what some of the personality system variables which have implications for success of retail firms might be. Among these variables are goals, values, beliefs, and attitudes.
Cognitive elements

In the discussion of the personality system, goals, values and beliefs, were each discussed as separate elements. It was indicated that human behavior tends to be goal directed, that individuals tend to have hierarchies of goals and values and that individuals tend to differ in their goals, values and beliefs. In this section goals, values and beliefs are treated together as cognitive elements.

In the discussion of cognitive mapping it was indicated that each individual's cognitive elements tend to be organized into a meaningful whole. It was suggested that an individual's cognitive map influences the way new phenomena are perceived and the way situations are defined. It was further suggested that individuals tend to act in ways which are consistent with their cognitive elements. In the discussion of decision-making it was suggested that decision-making is a type of action and that an actor's cognitive elements (cognitive map) not only influence how he will define given situations but also his decision-making. It was suggested on page 47 that:

The actor's own knowledge, beliefs, values, and attitudes have important implications not only for the way situations are defined but also for the choices which are made. And it is through their influence on choices made by the actor that personality system elements and processes have their greatest effect on economic success.

It is expected, then, that various cognitive elements influence action, and consequently, outcomes of action. It is not assumed, however, that all goals, values, and beliefs are related to all kinds of outcomes of action. It is probably more accurate to suggest that only certain goals, values and beliefs are related to
certain relevant actions and outcomes of action. The problem is to discover which variables are related and the nature of the relationships. A general hypothesis is stated below from which ten specific hypotheses were derived. The specific hypotheses are presented in the following pages.

**General Hypothesis 1.** Certain relevant cognitive elements of managers of retail firms are related to the economic success of the firms they manage.

There is little doubt about the truth of the above statement. It is a particular proposition rather than a universal proposition. Therefore, only one affirmative case is needed to support it. What is desired is to develop more specific universal hypotheses which specify which cognitive elements of managers are related to economic success of retail firms and to specify the nature of the relationships. Ten specific hypotheses relevant to General Hypothesis 1 are presented in the following pages. These hypotheses are stated with reference specifically to farm machinery dealers and the firms they manage, rather than referring more generally to managers of retail firms. (The data used to test the hypotheses were gathered from farm machinery dealers.) Farm machinery dealers are, of course, managers of retail firms. Care must be taken in generalizing to managers of other types of retail firms from the data on farm machinery dealers but the data do allow certain

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1The hypothesis as stated is a particular proposition rather than a universal proposition (48, p. 37; 97, p. 165). The specific hypotheses which were derived from General Hypothesis 1, however, are universal propositions.
inferences to be made.

All of the specific hypotheses stated in this thesis are hypotheses of linear relationship between variables. Most of them posit zero order relationships. Some hypotheses of multiple relationships are also stated.

**Value placed on mental activity** The first specific hypothesis pertains to the relationship between the value placed on mental activity by farm machinery dealers and economic success of farm machinery dealerships.

In the section on decision-making it was suggested that decision-making is an individual process which is very important to success in retail firms. The importance of reflective thinking and rationality for effective decision-making was emphasized. Rationality is sometimes assessed in terms of the effectiveness of the means selected for the attainment of the actor's goals (39). If an actor tends to place relatively more emphasis than other actors on reflective thinking and on planning ahead he may be willing to devote more time and effort to mental activity and, consequently, arrive at more rational decisions. Actors who tend to emphasize physical activities as opposed to mental activities may be expected to spend less time than others gathering information and considering alternatives and thus may make less rational decisions. Thus, if economic success is an important goal for an actor he may be more effective in attaining this goal if he places a high value on mental activity than if he does not. The value placed on mental activity may thus be related positively to economic success. A study by
Hobbs (39) provides limited support for this contention. Hobbs' data indicated that economic productivity of farm operators was correlated positively \( r = .113 \) to the relative value placed on mental as opposed to physical processes in farming. While the relationship was in the hypothesized direction it was not statistically significant (at the .05 level). Hobbs indicated that the lack of significance might have been due to the operational measures used rather than due to an actual lack of relationship between the variables measured. Hobbs' data were for farm operators rather than for farm machinery dealers.

The following hypothesis was derived from the above considerations.

1. **Specific Hypothesis**. The relative value placed on mental activity by farm machinery dealers is related positively to the economic success of the firms they manage.

2. **Progressivism**. The willingness of a manager of a retail firm to keep himself and his business up to date and to be continually learning and trying new things is referred to as progressivism.

In the introduction to this thesis it was indicated that farming and the farm machinery business are undergoing change. Farm machinery dealerships are becoming larger and the products sold are becoming more complex. In such a situation the ability to keep pace with the changes

---

1. Relative to other farm machinery dealers.
2. While not explicitly stated in the hypothesis, the hypothesis is one of linear relationship and will be tested by correlation analysis. Only linear relationships are tested in this thesis.
may be a necessary attribute of successful managers. In the discussion of facilities it was suggested that:

The products sold by any given retail firm and the services provided must be adapted to the needs and desires of the customers of that firm. They must be up to date and they must be adapted to the locality.

Studies of adoption of new farm practices among farmers indicate that progressivism, as measured by speed in adopting new practices, tends to be related positively to farm income (62; 95). Data by Beal and Bohlen indicate that business volume of fertilizer dealers tends to be related positively to "...the degree to which the dealer sees himself as being more change oriented than his farmer customers" and related positively to "...being progressively oriented toward new merchandising techniques" (7).

The following specific hypothesis was derived from the above considerations.

Specific Hypothesis 2. The relative progressivism of farm machinery dealers is related positively to the economic success of the firms they manage.

Value placed on security. The value placed on security refers to the relative willingness of managers to act in situations of uncertainty and to take risks. Farm machinery dealers who place a relatively high value on security are those who are relatively unwilling to take risks themselves and who tend to think others take too many risks.

It was indicated in the section on decision-making that a decision-maker confronted with a complex problem will not have all of the relevant information, will not be able to consider all possible alternatives and
will not be able to foresee all the consequences of a given course of action. Most decisions are made in situations involving at least some degree of uncertainty. Even where information is available on which to base the decisions, the alternatives often involve some degree of risk. (Risk and uncertainty are differentiated on the basis of the availability of information with which to estimate the probabilities of various outcomes. In situations involving risk the probabilities can be estimated while in uncertainty there is not sufficient information to estimate the probabilities (39; 54).)

The willingness of a manager to take risks has important implications for the way he evaluates alternatives in the process of making management decisions. If, for example, a manager always chooses the alternative which involves the least amount of risk (regardless of the ratio of costs to expected returns) he will probably miss many opportunities to increase his financial returns. The overall effect of extreme emphasis on security is often a reduction in income. According to Hobbs:

Several studies have indicated that many managers discount long run returns heavily because of uncertainty in the short run and as a result make conservative, sub-optimum decisions which may minimize losses but not maximize returns (39, p. 60).

In his study of farm operators Hobbs found a significant inverse relationship between economic returns and risk aversion. Studies by Bohlen and Beal (16) and Hess and Miller (37) also indicate that economic returns and willingness of farmers to take risks tend to be related.

On the basis of these considerations the following hypothesis
was developed:

**Specific Hypothesis 3:** The relative value placed on security (risk aversion) by farm machinery dealers is related **negatively** to the economic success of the firms they manage.

**Value placed on economic goals** In this thesis it is assumed that most human behavior is goal directed. Both individual actors and social systems are assumed to have a plurality of goals which influence their behavior. The goals which are the most highly valued differ from actor to actor and from system to system. Several goals of economic firms were indicated in the discussion of goals of social systems. It was suggested that in this thesis the primary goal of retail firms is assumed to be one of "...achieving some optimum level of income by providing goods and services for the customers of the firm." This does not imply, however, that this goal is shared equally by all managers of retail firms. It is expected that farm machinery dealers differ in the importance they place on this goal and these differences will be related to differences in the economic success of their business enterprises.

If an actor selects alternatives in such a way as to attempt to optimize goal attainment and if economic goals have primacy it follows that decisions will be made in such a way as to attempt to optimize economic success.

Atkinson and Hoselitz (4) consider the relationship between motivation and success of entrepreneurs to be a basic relationship between personality systems and economic entrepreneurship. And Hobbs (39) found a significant positive relationship between economic productivity and
the relative value placed on economic ends by farm operators \((r=.222)\). Thus, the following hypothesis was developed:

**Specific hypothesis 4:** The relative value placed on economic goals by farm machinery dealers is related **positively** to the economic success of the firms they manage.

**Value placed on non-economic goals** In the section on the pattern variables it was suggested that economic firms tend to be characterized by affective neutrality, universalism, achievement and specificity \((\text{Gesellschaft})\). It was suggested that the extent to which a manager of a retail firm tends to value Gemeinschaft relations rather than Gesellschaft relations might limit the economic success of the firm. An example of this would be the affectivity-affective neutrality dichotomy. If a manager were highly concerned with maintaining affective relationships \((\text{e.g. having many friends})\), he might be inclined in making decisions to sacrifice economic returns in order to be popular with his customers and other employees. Other non-economic goals \((\text{besides having many friends})\) might also tend to compete in decision-making with economic goals. Thus, the following hypothesis was developed:

**Specific Hypothesis 5:** The relative value placed on non-economic goals by farm machinery dealers is related **negatively** to the economic success of the firms they manage.

**Value placed on approval of peers** In the conceptual framework it was indicated that the need for approval is a human need. It was also suggested that awarding and withholding approval are important positive and negative sanctions. As a form of sanctions, the giving
or withholding of approval is a means of assuring conformity to system norms. The need for approval is not of equal salience for all individuals. Some actors value the approval of their peers more highly than do others. Persons who place a very high value on the approval of others may be expected to conform to the expectations of others more than do other individuals; they are less likely to deviate from established ways of doing things.

An extreme concern with conformity and approval could have adverse effects on the economic success of a firm. If a dealer were greatly concerned in making decisions with whether his action would be approved or not, he might be reluctant to select alternatives involving new or unusual ways of doing things, even if the new way was more effective economically. In such a case the high value placed on the approval of peers would result in lower economic returns than might have been attained otherwise. The following hypothesis was derived from these considerations:

Specific Hypothesis 6: The relative value placed on the approval of peers by farm machinery dealers is related negatively to economic success of the firms they manage.

Value placed on independence in decision-making A person who places a high value on independence in decision-making is one who likes to make his own decisions rather than to allow others to make them for him. He makes his decisions on the basis of the criteria that he considers to be most relevant, rather than merely trying to please other persons. This is not to say that he will not seek information and
advice from others. It means, rather, that once the decision-maker has the information he feels he needs, he makes the decision on the basis of the criteria which he personally feels are most relevant. Since such a person can be expected to make decisions on the basis of their efficacy for satisfying system goals rather than on the basis of other considerations (approval, etc.), the more independent person may be more successful economically than other persons. In his study of farm operators Hobbs found this to be the case. Hobbs (39) found a significant positive relationship between management return and independence ($r = .371$).

The following hypothesis was derived from the above considerations:

**Specific Hypothesis 7:** The relative value placed on independence in decision-making by farm machinery dealers is related positively to the economic success of the firms they manage.

**Value placed on keeping informed** In the process of making decisions actors tend to formulate alternative choices of action and to evaluate them in terms of the information they have that is relevant to the problem being considered. Five of the six approaches to decision-making listed in Table 1 explicitly included a stage for observation, analysis of the situation or gathering information. While past experience is an important source of information, other information is also necessary if the decision-makers are to effectively evaluate alternatives with which they have had no personal experience. In a business undergoing change it is important to be informed not only on new developments in products and services but also on the latest sales and management techniques. It is expected that the better informed
farm machinery dealers will be more successful in attaining economic goals than will those who place less emphasis on keeping up to date on recent developments.

A study of fertilizer dealers by Beal and Bohlen (7) indicated the importance of knowledge. In their study:

Highly significant relationships were found between the dealer's fertilizer knowledge and: Volume of fertilizer sold, fertilizer markups, and fertilizer gross profits (7, p. 17).

Hess and Miller also found knowledge to be positively related to economic returns in a study of dairy farmers (37).

Studies of the adoption of farm practices indicate that farmers who adopt practices early tend both to place more emphasis on keeping informed and to have higher incomes than the average in the areas where they live (62; 95).

On the basis of these considerations the following hypothesis was developed:

Specific Hypothesis 8: The relative value farm machinery dealers place on keeping informed is related positively to the economic success of the firms they manage.

Value placed on influencing farmers' decisions The importance of information for farm machinery dealers was indicated above. Once a machinery dealer has information he can use it in two main ways. First he can use the information himself in making his own decisions about what products to handle, what services to provide, what management and sales techniques to employ, etc. Second the dealer can use the information in discussing farm machinery matters with his farmer customers.
He can suggest alternative means to farmers for solving their machinery problems and can provide information needed by the farmers as they evaluate various decisions on machinery purchase and use.

Studies of fertilizer and agricultural chemical dealers have indicated that providing information is related to business success (7; 123). Referring to fertilizer dealers, Beal and Bohlen stated:

Dealers who do have adequate knowledge about fertilizer and who feel that they should be fertilizer consultants and that they should make recommendations to farmers about fertilizer use tend to have higher fertilizer sales, are able to maintain higher markups, and have greater fertilizer gross profits (7, p. 6).

Iowa State University data indicate that farmers in Iowa want farm machinery dealers to give them advice on the use of machinery (18). These considerations indicate that willingness and ability to provide information may well be related to economic success of farm machinery dealerships and other retail firms. The following hypothesis was developed:

Specific Hypothesis 2: The relative value farm machinery dealers place on influencing farmers' decisions is related positively to the economic success of the firms they manage.

Cognitive elements (a weighted combination) Hypotheses were stated above suggesting relationships between each of nine cognitive elements and economic success of farm machinery dealers. Included among the nine cognitive elements were progressivism and the value placed on: mental activity, security, economic goals, non-economic goals, approval of peers, independence in decision making, keeping informed and influencing farmers' decisions. While these various
cognitive elements are not completely orthogonal (the value placed on approval of peers and the value placed on independence, for example, would appear to be inversely related), each does pertain to a somewhat different dimension than is measured by any of the others. If these nine cognitive elements are at least somewhat independently related to economic success of farm machinery dealerships then a weighted combination of the elements should explain more of the variance in economic success than would any one of them taken alone. Thus, the following hypothesis was developed:

**Specific Hypothesis 10:** A weighted combination of certain cognitive elements of farm machinery dealers is related to economic success of the firms they manage.

**Background characteristics**

In addition to the cognitive elements mentioned above, certain other personality system variables are also expected to influence economic success of retail firms. Among these are variables such as the age, education and various past experiences of the manager. Differences in age among individuals tend to be associated with: differences in past experiences and learning opportunities, differences in opportunities to accumulate assets, differences in stage of family cycle, differences in physical and (sometimes) mental abilities, and differences in values, beliefs and goals. Thus, it is difficult to say precisely how background characteristics such as age are related to action and outcomes of action (including economic success). Numerous studies have indicated, however, that such background
characteristics do tend to be related to variables such as economic success (37; 39; 62; 95; 110). Thus, the following general hypothesis was developed:

**General Hypothesis 2:** Certain relevant background characteristics of managers of retail firms are related to the economic success of the firms they manage.

**Age** It has been indicated that the relationship between age and economic success is an indirect one. Rationale can be developed for suggesting that age is positively related to economic success and also to suggest a negative relationship. It might be most realistic to suggest a curvilinear relationship, with managers in the middle age categories having the greatest economic success. These managers would, generally, have had more time than younger managers to become established in their businesses and to establish a clientele. They would have received more formal education than older managers (age is negatively related to years of education among farm machinery dealers) but would have the benefit of practical on the job experiences. These managers in the middle categories of age would have had an opportunity to accumulate capital but wouldn't be thinking yet of retirement. They wouldn't yet have reached the age when their physical and mental abilities were beginning to deteriorate seriously.\(^1\) And they would

\(^1\)According to Berelson and Steiner: ...mental ability grows rapidly from birth through puberty, somewhat more slowly from then until the early twenties at which point slow but steady decline sets in, with rather rapid deterioration beginning about age sixty-five. (8, p. 220).
probably not be oriented toward security in decision-making as much as older managers.

This suggestion of a curvilinear relationship is supported by a study of farm operators by Taylor which indicated that farm operators between 40 and 60 years of age had higher gross incomes than did older and younger farmers (110).

The above rationale, then, suggests that the relationship between age and economic success may be a curvilinear relationship rather than a straight linear one. If a straight line relationship were to be predicted, however, such factors as education, decline in physical abilities and orientation toward security might lead one to suggest a negative rather than a positive relationship. Data from studies of farm operators support this suggestion of a negative relationship. In a sample of farm operators Hobbs (39) found a negative correlation between age and management return \( r = -.177 \). And according to a study by Hess and Miller:

...age, like health, does not appear to be an important factor affecting farming operations on a large number of farms, but in a few cases, less than 10 percent, it apparently was the most important single factor limiting operations (37, p. 27).

Since only linear relationships are hypothesized in this thesis, the hypothesis stated below is one of negative linear relationship. It is expected that, while the relationship is probably somewhat curvilinear, there will be enough of a linear trend to yield a significant zero order correlation coefficient.

**Specific Hypothesis 11:** The relative age of farm machinery
dealers is related negatively to the economic success of the firms they manage.

**Formal education** The importance of knowledge and of keeping up to date on latest information relative to farm machinery have already been emphasized. In the section on decision-making it was pointed out that decision-making is a mental process which is most effective when it involves reflective thinking. Since two main functions of formal education are to impart knowledge and information and to teach students to think effectively, it follows that, in general, increased formal education should be accompanied by increased effectiveness in making decisions. And, given a goal of economic success, effectiveness in decision-making should be positively related to economic success.

Significant positive relationships between years of formal education and economic returns have been found in studies of farm operators (37; 110). In a study by Hobbs (39) the relationship was not significant but it was in the hypothesized direction and it approached significance.

On the basis of the above considerations the following hypothesis was developed:

**Specific Hypothesis 12**: The relative education of farm machinery dealers is related positively to the economic success of the firms they manage.

**Management experience** In the discussion of age it was suggested that the older a person is the more past experiences he might have to draw upon in making decisions. This comment is possibly even more
applicable to number of years of management experience than to age
since past experiences as a manager tend to be relevant to future manage-
ment decisions.

It might appear that age and years of management experience would
be highly related. Many of the comments on the indirect effect of age
on action and outcomes would seem to apply also to years of management.
While this is true, it is not necessarily the case that age and years
of management experience measure essentially the same thing. Not all
farm machinery dealers assumed management positions at the same age.

It is assumed that years of management experience is a better in-
dicator than age of opportunities for learning (through experience)
those things which should help a manager to be more effective in manage-
ment and decision-making. Thus, while it was hypothesized that age is
negatively related to economic success, number of years of management
experience is hypothesized to be positively related to economic suc-
cess.

Specific Hypothesis 13: The relative management experience of
farm machinery dealers is related positively to the economic success
of the firms they manage.

Cognitive elements and background characteristics (a weighted combina-
tion)

To the extent that the background characteristics discussed above
(age, education, years of management experience) are related to eco-
nomic success, independently of the relationships involving cognitive
elements, they should predict additional variation in economic success.
Thus, the following hypothesis of multiple relationship was developed:

Specific Hypothesis 14: A weighted combination of certain cognitive elements and background characteristics of farm machinery dealers is related to economic success of the firms they manage.

The Social System

The first theoretical proposition and the hypotheses presented above pertained to relationships between the personality system of the manager and economic success of retail firms. The second general proposition and the hypotheses presented below pertain to relationships between the social system and economic success of retail firms.

Theoretical Proposition 2, like Theoretical Proposition 1, was derived directly from Equation 3, page 15. According to Equation 3 outcomes of action (economic success) are partially a function of the social system (and of the personality of the actor, other personality systems, the culture and physical objects). Theoretical Proposition 2 follows from Equation 3:

Theoretical Proposition 2: Certain relevant characteristics of retail firms as social systems are related to the economic success of the firms.

This proposition is similar to Theoretical Proposition 1 in actually providing little information. It is too general to give any indication of what characteristics of retail firms as social systems are involved in the relationship or of the nature of the relationships.

The section of the conceptual framework in which the social system is
discussed, however, does indicate some social system elements and processes which have implications for economic success of retail firms. Among these are the beliefs, values, goals and norms extant in the system. Also important are the various positions and roles in the system, the various ranking or hierarchy structures, the use of sanctions, and the facilities of the system. Important social processes include communication, socialization, social control, institutionalization and allocation.

The characteristics of retail firms as social systems which are emphasized in this thesis are facilities and resources.

**Facilities and resources**

Facilities and resources refer to the means which the members of a social system have available for use in goal attainment. Included among facilities and resources are physical objects, power, access, and money. It has already been suggested that human individuals are not considered to be facilities. When they are considered in terms of their instrumental significance, however, they can be referred to as resources. Facilities and resources together, then, refer to anything which has instrumental significance in a social system.

Retail firms differ in the facilities and resources which they have at their disposal. The alternative choices of action which are open to managers of retail firms are to some extent limited by the facilities and resources available to be used in pursuing various courses of action. And the effectiveness of various position incumbents in performing their roles is also influenced by the facilities
which are available for their use. It is, therefore, expected that the facilities and resources in a social system will be related to goal attainment of that system. Thus General Hypothesis 3 was developed:

**General Hypothesis 3:** Certain relevant facilities and resources of retail firms are related to the economic success of the firms.

**Number of employees** Employees of retail firms are members of the firm as a social system and are individual actors. For analytic purposes, however, they may be considered from a strictly instrumental perspective. From such a perspective employees are resources which function as means to the attainment of system goals.

Retail firms vary both in the number of persons that they employ and in the quality of their employees. Some employ very few persons while others employ many. In some firms employees each perform a variety of tasks while in others each employee is trained for and responsible for a limited range of specialized duties. In general, as firms become larger they tend to be characterized by increased division of labor and also by increased structural complexity (12). The increased differentiation of functions and specialization, which often accompanies increased size, may have two functional outcomes. First, the specialization may increase the quality of the service which the firm is able to make available to its customers. Second, if accompanied by necessary administrative changes, the increased differentialization may tend to reduce costs per unit of output.

According to Blau, et al.:
Small undifferentiated agencies are most likely to operate at high costs. Either an increase in differentiation or an increase in size tends to reduce operating costs (12, p. 188).

Larger firms thus have the potential, relative to smaller firms, of providing more specialized services for their customers and, also, of reducing costs per unit of output (depending upon the effectiveness of management). This suggests a possible positive relationship between number of employees and economic success of the firm. The following hypothesis was, therefore, developed:

**Specific Hypothesis 15**: The relative number of employees in farm machinery dealerships is related **positively** to the economic success of the firms.

**Financial resources**  In previous discussions of facilities and resources it has been indicated that the choices available to decision-makers depend to some extent on the resources which the decision-maker has at his disposal. It was also indicated that the role performance of various position incumbents may be affected by the facilities which are available to them. This contention is supported by Hess and Miller's study of farm operators (37). They found that the measures used by dairy farmers to improve the performance of their dairy operations were limited by the amount of capital available. Thirty-eight per cent of the operators listed lack of capital as "...the major reason for not being able to take desired measures to improve their herd performance and to reduce dairy labor requirements" (37).

Research in the adoption of farm practices also indicates that early adopters tend to have more favorable financial positions than
later adopters (95). If lack of financial resources does restrict the feasible alternatives for managers of retail firms then it can also be expected to have a depressing effect on income. In his study of farm operators Hobbs (39) found a significant positive relationship between management return and total capital managed \( r = 0.272 \).

On the basis of these considerations the following hypothesis was developed:

**Specific Hypothesis 16:** The relative financial resources of farm machinery dealerships are related *positively* to the economic success of the firms.

**Line of products** The various lines of farm machinery differ in more ways than just the physical attributes of the machines and equipment. The manufacturing companies also differ in various policies, in emphasis on engineering, in emphasis on advertising and in the image farmers have of them. These and other differences among the lines of machinery can be expected to have implications for the retail firms which sell them. The various machinery lines also differ in the relative number of machines sold and in the number of dealerships which sell their products. While the most popular lines (in terms of number of machines sold) also tend to have the highest number of dealers, it may well be that dealers selling these more popular brands have greater economic success than other dealers. Thus, the following hypothesis was developed:

**Specific Hypothesis 17:** The line of products sold by farm
machinery dealerships is related positively\textsuperscript{1} to the economic success of the firms.

**Facilities and resources (a weighted combination)** To the extent that Specific Hypotheses 15 through 17 are independent of each other, a weighted combination of facilities and resources should explain more variation in economic success than any one of them taken alone. The following hypothesis of multiple relationship was, therefore, developed:

**Specific Hypothesis 18**: A weighted combination of certain facilities and resources of farm machinery dealerships is related to the economic success of the firms.

**Activities of Managers**

The first two theoretical propositions were derived from Equation 3. The third theoretical proposition derives from Figure 1, page 14. According to Figure 1 actors act in situations. The way an actor acts is influenced by his personality and by the situation. The outcome of his action results both from his action and from the situation in which he acts. Since economic success of retail firms can be conceptualized as an outcome of action and since the manager is assumed to be the most important single actor in a retail firm, the following proposition follows from Figure 1.

\textsuperscript{1}In this case a positive relationship means that dealers selling the most popular lines, in terms number tractors owned by farmers, will be more successful than dealers selling less popular brands.
Theoretical Proposition 3: Certain relevant activities of managers of retail firms are related to the economic success of the firms they manage.

Management activities

The importance of management activities, especially decision-making, has been emphasized repeatedly in this thesis. In the discussion of decision-making it was suggested that it is through their influence on decision-making that personality system elements and processes have their greatest effect.

Five main areas of management were delineated in the discussion of management functions. These include planning, organizing, directing, coordinating and controlling. It was suggested that each of these areas of management has implications for economic success of retail firms. The following hypothesis was, therefore, developed:

General Hypothesis 4: Management activities of managers of retail firms are related to the economic success of the firms they manage.

Time spent in management and supervision Managers of retail firms may be expected to differ from each other in their emphasis on management and in their actual management activities. They differ not only in the quality of their management activities but, also, in the amount of time that they devote to management. Some prefer to spend a high proportion of their time in management activities while others prefer to devote their time to other activities such as sales and machinery repair. It is likely that managers of larger business operations spend more time in management than do managers of smaller firms. Since management is considered to be a crucial activity in retail firms,
it is probable that the amount of time devoted to management is related to economic success. Thus, the following hypothesis was developed:

**Specific Hypothesis 19:** The relative amount of time spent in management and supervision by farm machinery dealers is related positively to the economic success of the firms they manage.

**Sales activities**

In the discussion of system goals it was stated that the main goal of retail firms is assumed to be one of achieving some optimum level of income by providing goods and services for the customers of the firm. Among the activities most directly related to the sale of products are the various sales activities. If sales policies and activities are developed and undertaken in such a way as to facilitate the goal of selling a high volume of goods at a reasonable profit it is likely that the firm will be more successful economically than if sales activities receive less emphasis. Thus, the following hypothesis was developed:

**General Hypothesis 5:** Sales activities of managers of retail firms are related to the economic success of the firms.

**Time spent in sales activities** Farm machinery dealerships are relatively small in size (in terms of number of employees) and the division of labor in such firms is not usually highly complex. Often the various persons in the firm each have multiple roles. Farm machinery dealers typically have at least some involvement in most of the activities of the dealership. A hypothesis of relationship between time devoted to management and supervision and economic success
was developed above. It is not expected however that any dealer will devote all of his time to management and supervision. Some time will probably also be devoted to various other activities including repair work and sales. Since selling goods at a profit is important to attainment of the economic goals of retail firms, sales activities are crucial to the success of retail firms. Unless sales transactions are actually consummated, various other activities will bear little fruit in terms of economic returns. Thus, time devoted by managers to sales may also be important to economic success of retail firms (in addition to time devoted to management and supervision).

**Specific Hypothesis 20:** The relative amount of time spent in sales activities by farm machinery dealers is related positively to the economic success of the firms they manage.

**Information seeking activities**

In the development of Specific Hypothesis 8 the importance of information was emphasized. It was indicated that information is essential for effective decision-making. Specific Hypothesis 8 suggested a positive relationship between the value placed on keeping informed by farm machinery dealers and economic success. Thus, the following hypothesis was developed:

**General Hypothesis 6:** Information seeking activities of managers of retail firms are related to the economic success of the firms they manage.

**Number of information sources used** Decision-makers have available to them a wide variety of sources of information for use in making
decisions. From the wide variety of available information sources they can select those which they feel are relevant to the types of decisions they must make. Various information sources are also helpful in providing information which may be used by farm machinery dealers in making information and advice available to their customers. While various information sources differ in the quality of information which they provide, there is probably a positive relationship between the number of information sources which a dealer uses and the amount and quality of information to which he is exposed. If this is the case then dealers who use relatively more information sources than others have greater access to information on which to base their decisions. This may result in greater economic success for the dealers who use relatively more information sources.

Hobbs (39) found a significant positive relationship for farm operators between number of information sources used and management return \( (r = .179) \). Research in adoption of farm practices also indicates that use of information sources and economic returns tend to be related (62; 95).

Based on the above considerations the following hypothesis was developed:

Specific Hypothesis 21: The relative number of information sources used by farm machinery dealers is related **positively** to the economic success of the firms they manage.
Activities of managers (a weighted combination)

Hypotheses were developed above suggesting relationships between economic success of retail firms and management activities, sales activities and information seeking activities of the managers of the firms (farm machinery dealers). If these three types of activities are to some extent orthogonal, then taken together they should explain more variance in economic success than any one of them considered alone. Thus, the following hypothesis was developed:

Specific Hypothesis 22: A weighted combination of certain activities of farm machinery dealers is related to the economic success of the firms they manage.

Personality System, Social System and Activities of Managers (A Weighted Combination)

Hypotheses were developed above suggesting relationships between economic success of retail firms and personality system variables, social system variables and certain activities of managers. Each of these categories of variables is expected to explain part of the variance in economic success of retail firms. To the extent that these categories of variables are independent of each other, a weighted combination of them should explain more of the variance in economic success than any one of them alone. Therefore, the following hypothesis of multiple relationship was developed:

Specific Hypothesis 23: A weighted combination of certain personality variables, social system variables and activity variables is
related to economic success of farm machinery dealerships.

This concludes the presentation of the hypotheses of this thesis. The next chapter contains information on the methods and procedures used to test the hypotheses.
METHODS AND PROCEDURES (OPERATIONALIZING THE CONCEPTS AND TESTING THE HYPOTHESES)

Introduction

In the first chapter of this thesis the (two) problematic orientations and the objectives of this thesis were stated. The conceptual framework was developed in the second chapter. Three theoretical propositions, six general hypotheses and 23 specific hypotheses were developed in the third chapter. The development of these propositions and hypotheses involved application of the conceptual framework to the problem of differential economic success in retail firms.

The concern of the present chapter is with the data, procedures and methodology used in testing the hypotheses. The first section of this chapter contains a brief discussion of the field study from which the data used in this thesis were drawn. The general nature of the field study is indicated and the sampling and data gathering procedures are mentioned. This section is followed by the development of the empirical measures used to operationalize the main concepts in the specific hypotheses. Then the types of statistical analysis used in testing the hypotheses are briefly discussed.

The Field Study

This study is ex post facto to the extent that the data used to test the specific hypotheses were gathered before the conceptual framework and the hypotheses were explicitly stated. The data,
however, had not been analyzed in such a way as to test the hypotheses before the hypotheses were explicitly formulated. The main limitation of such an approach is that the hypotheses which were tested and the way that they were tested were limited by the field study from which the data were drawn. In the case of this thesis, the data were provided by a study of farm machinery dealers in Iowa.

The data were gathered as a part of Iowa Agricultural Experiment Station Project 1518. This project is concerned with sociological, psychological and economic factors related to the farm machinery business in Iowa. The project is under the supervision of Dr. Joe M. Bohlen, Professor of Sociology, and Dr. George M. Beal, Professor of Sociology, at Iowa State University. The project has two main phases: a farmer phase and a dealer phase. The farmer phase is concerned with "Personal, social and economic characteristics of farmers in their purchase and use of farm machinery." A main concern of the dealer phase is with "...the personal, social and economic characteristics of farm machinery dealers and the relation of these characteristics to the amounts, kinds and brands of machinery sold."

Farmers in a stratified random sample of farm operators in Iowa were interviewed for the farmer phase of Project 1518. Dealers in a stratified random sample of farm machinery dealers in Iowa were interviewed for the dealer phase. The data in this thesis were gathered from the sample of dealers.

Before drawing the sample of farm machinery dealers, lists of farm machinery dealers in Iowa were obtained from the Iowa Retail Farm
Equipment Dealers' Association and the Midwest Farm Equipment Dealers' Association. These lists were checked for completeness in five counties and were judged to be adequate. A sample stratified by economic areas was then drawn in cooperation with the Iowa State University Statistical Laboratory. Only those dealers in the sample who had sold new tractors for at least one year and who made the major management decisions for their respective firms were considered qualified to be interviewed.

The interviewing was largely completed in the spring of 1963 by trained field interviewers. A total of 101 dealers were personally interviewed.

There were some problems in obtaining some of the information that was wanted. Data on the financial aspects of the businesses were especially difficult to obtain. After schedules with data missing or data of questionable accuracy were eliminated, a total of 79 usable schedules remained. Data from these 79 schedules are used in testing the hypotheses of this thesis.¹

Some selected characteristics of the 79 farm machinery dealers and dealerships included in the final sample are indicated in Table 2.

Operational Measures

Twenty-three specific hypotheses were presented in the previous section. Before these hypotheses could be tested it was necessary to

¹The twenty-two schedules which were eliminated did not differ significantly from the remaining 79 schedules as far as basic characteristics of dealers (age, education, etc.) were concerned.
Table 2. Selected characteristics of the dealers and dealerships in the sample

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Range</th>
<th>Interquartile Range</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total volume of sales and service in dollars</td>
<td>14,800-1,138,000$^b$</td>
<td>118,500-308,200</td>
<td>256,200</td>
</tr>
<tr>
<td>Total income from repair work and service not including parts</td>
<td>400- 105,700</td>
<td>6,600- 15,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Net worth of the business$^c$</td>
<td>3,000- 372,000</td>
<td>26,800- 86,200</td>
<td>72,200</td>
</tr>
<tr>
<td>Number of new tractors sold</td>
<td>0 - 57</td>
<td>6 - 19.25</td>
<td>14.5</td>
</tr>
<tr>
<td>Number of full time employees including the dealer</td>
<td>1 - 24</td>
<td>3 - 7</td>
<td>5.9</td>
</tr>
<tr>
<td>Age in years of the dealer</td>
<td>22 - 69</td>
<td>39.75 - 53</td>
<td>46.8</td>
</tr>
<tr>
<td>Number of years as manager of the business</td>
<td>1 - 40</td>
<td>6 - 18.25</td>
<td>14.2</td>
</tr>
<tr>
<td>Number of grades of school completed</td>
<td>3 - 16</td>
<td>9.75 - 12.25</td>
<td>11.4</td>
</tr>
</tbody>
</table>

$^a$The data are for fiscal years ending between August 1, 1962 and April 1, 1963.

$^b$All dollar figures in the table are rounded to the nearest 100 dollars.

$^c$The median value of 49,100 was used for seven cases of missing data.
develop operational measures of the concepts which were hypothesized to be related. These operational measures are presented in this section.

Measures of economic success

Each of the hypotheses involves the concept economic success. Two measures of economic success were developed.

In the discussion of social system goals it was stated that the main goal of retail firms is assumed to be one of achieving some optimum level of income by providing goods and services for the customers of the firm. This suggests two possible points of emphasis in the measurement of economic success. The first approach follows from an emphasis on the first part of the primary goal as stated above "...achieving some optimum level of income..." If this income aspect is emphasized then success can be measured by a measure of income; the higher income the firm has, the more successful it is assumed to be economically. This approach, however, still leaves the following questions unanswered. What measure of income is most appropriate for measuring economic success? Is net income more indicative of economic success than gross income, or vice versa?

Net income is available to the owners of the enterprise to use or invest as they see fit after expenses have been deducted. Varying levels of expenses, however, may correspond to any given level of gross income. Therefore, net income measures more directly, than does gross income, the returns to the owners of the business. Net income is considered to be a measure of economic success of retail
firms. The following question was asked to ascertain the net income of the respondents:

What was your net income before taxes from this business for your last completed fiscal year?

Not all of the dealers' responses to this question were assumed to be adequate measures of net income. It was necessary to make adjustments to some of the figures. It was necessary to adjust for differences in salaries paid by the managers to themselves and to their families. And some dealers refused to give their exact net income, indicating only a range. Because of these difficulties it was not considered feasible to attempt to assign a given net income figure to each dealership. Instead, each farm machinery dealership was placed into one of three categories of net income. The categories and the number of dealerships in each are indicated in Table 3.

Table 3. Net income of the farm machinery dealerships

<table>
<thead>
<tr>
<th>Net income in dollars</th>
<th>Dealerships</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5000</td>
<td></td>
<td>24</td>
<td>30.4</td>
</tr>
<tr>
<td>5000 - 12,000</td>
<td></td>
<td>28</td>
<td>35.4</td>
</tr>
<tr>
<td>Over 12,000</td>
<td></td>
<td>27</td>
<td>34.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>79</td>
<td>100.0</td>
</tr>
</tbody>
</table>

A second possible point of emphasis in measuring economic success is to also emphasize the last part of the statement of the primary goal
of retail firms -- to emphasize the function of providing goods and services. If this is emphasized then the successful firm is one which provides a large volume of quality goods and services. In the discussion of goals of economic firms it was indicated that the following are among the goals that have been suggested as the main goals of economic firms: maintaining a given share of the market, maintaining a given rate of growth, and maintaining or enhancing status or power. A firm with a large dollar volume of sales and service not only satisfies the goal of achieving high gross income by providing goods and services; it also satisfies certain sub-goals, such as those relating to share of the market and growth. In addition to net income, then, economic success was also measured for this thesis by total volume of sales and service in dollars. The figure for total dollar volume of sales and service for each respondent was arrived at by summing the figures given in response to the following questions:

What was your total volume of gross sales in dollars for your most recently completed fiscal year? (sale of products, not including customer service income)

What was your total gross income from repair work and services, not including parts?

The total volume of sales and service ranged from 14,800 dollars to 1,138,000 dollars for the dealerships in the sample. The inter-quartile range was from 118,500 dollars to 308,200 dollars. The mean was 256,200 dollars. Only seven of the dealerships had a total dollar volume of sales and service which exceeded 500,000 dollars.

The actual dollar figures rounded to the nearest one thousand dollars were used to measure total volume of sales and service in this
thesis, except for the seven dealerships which had incomes over 500,000 dollars. These seven were all coded as 500,000 to reduce the effect of these extreme values on the correlation coefficients.\footnote{The following table indicates the correlation among various ways of coding total dollar volume of sales and service. Code 1 is total dollar volume of sales and services with all responses over 500,000 dollars grouped and coded as 500,000 dollars. Code 2 is total dollar volume of sales and services with all of the actual values (rounded to the nearest 1000 dollars) coded. Code 3 is a logarithmic transformation of Code 2. Code 4 is a rank code with each of the dealerships coded from 1 to 79 depending upon its rank in total dollar volume of sales and service. Code 1 had the highest average correlation with the other codes and Code 2 had the lowest average correlation with the other codes.}

Net income and total volume of sales and service as measured above are assumed to measure economic success of farm machinery dealerships. To test the specific hypotheses it was also necessary to develop operational measures of the personality variables, social system variables and activity variables. These operational measures are presented in the following pages. The measures of the personality variables are presented first.

**Measures of personality system variables**

The personality system variables which are emphasized in this thesis include certain cognitive elements (goals, values, and beliefs)
and certain background characteristics of farm machinery dealers. While background characteristics such as age and education can be measured fairly easily, the measurement of cognitive elements is more complex. Inferences about cognitive elements of an actor must be made from some form of activity or verbalization by that actor. For this thesis dealers' responses to certain items on the interview schedule were assumed to measure cognitive elements of farm machinery dealers. Scales were used in measuring some cognitive elements. The dealers' responses to individual statements were assumed to measure other cognitive elements. The respondents' scores for the various cognitive elements were not assumed to be useful as absolute scores. They were, however, assumed to be useful in ranking the various respondents relative to each other on the particular item involved.

Value placed on mental activity A Likert type scale (28) was developed to measure the relative value placed on mental activity by farm machinery dealers. The individual items used in the scale were adapted from a previous study by Hobbs (40). The respondents were asked to respond for each of four statements whether they strongly agreed, agreed, were undecided, disagreed or strongly disagreed. The four statements included the following:

1. Spending the day working in the repair shop gives me a greater sense of satisfaction than spending the day working on the books.

1 There were originally five items. One was eliminated because of low correlations with the other four.
2. If I were to take a different job from a farm machinery dealership I would rather be a skilled craftsman than a white-collar worker.

3. Physical work is actually more satisfying and rewarding than mental activity.

4. Although keeping records and making plans for my business operation are important, the real difference between a successful and an unsuccessful machinery dealer is how hard they work.

Each farm machinery dealer received a score from 1 through 5 for each of the above items depending on how strongly he agreed or disagreed with the statements. The scores for the individual items were summed for each dealer, giving them a possible range of scores from 4 through 20. The individual items were scored in a way that a score of 20 indicated the highest value placed on mental activity (i.e., disagreeing with these statements resulted in a highest score).

The intercorrelations among the four items and their reliability were checked for the sample of farm machinery dealers. The inter-item correlations and item-total correlations are indicated in Table 4.

The inter-item correlations ranged from .1944 to .5112 and the item-total correlations ranged from .6467 to .8103. The reliability was .6794. Even though the correlations and the reliability were not as high as might be desired, it was decided to use the set of four items as a scale in this thesis (rather than using fewer than four of the items). It was felt that the four items taken together provided a better measure of the value placed on mental activity than would have been provided by a measure involving fewer of the items.
Table 4. Value placed on mental activity -- item intercorrelation and item-total correlations^a,b

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total^c,d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>----</td>
<td>.5112</td>
<td>.4895</td>
<td>.3133</td>
<td>.8103</td>
</tr>
<tr>
<td>2</td>
<td>----</td>
<td>.2300</td>
<td>.1944</td>
<td>.6778</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>----</td>
<td></td>
<td>.3391</td>
<td></td>
<td>.7209</td>
</tr>
<tr>
<td>4</td>
<td>----</td>
<td></td>
<td></td>
<td>.6467</td>
<td></td>
</tr>
</tbody>
</table>

^aThe .01 significance level for 79 cases is \( r = .2617 \) and the .05 level is \( r = .1866 \).

^bThe reliability of this four item scale is .6794. Reliability = \( n \overline{r} / [1 + (n-1) \overline{r}] \), \( n = 4 \) and \( \overline{r} = .3463 \) (93).

^cThe item total correlation is \( r_{jt} \simeq \frac{\sum r_{jj}^t}{\sqrt{\sum r_{jj}}} \) with the 1's in the diagonals included.

^dSince each item makes a contribution to the total it is possible for it to have a correlation with the total and not be correlated to the other items. The expected correlation due to the items contribution to the total is \( 1/\sqrt{n} \) where \( n = \) the number of items in the scale. For \( n = 4 \), \( 1/\sqrt{4} = .5000 \).

Progressivism The relative progressivism of the dealers was also measured by a Likert type scale. This scale was also composed of four items.\(^1\)

1. Most dealers spend too much time and effort in keeping themselves up-to-date on new merchandising practices.

2. Many of the new merchandising ideas that come out these days are not practical for the average dealer.

\(^1\)There were originally six items. Two were eliminated due to low correlations with the other items.
3. So many new 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. The continuous changes taking place in business practices make it difficult for me.

Each farm machinery dealer received a score from 1 through 5 for each of the items depending on how strongly he agreed or disagreed with them. The scores for the four items were summed for each dealer. The individual items were scored in such a way that a score of 20 was assumed to indicate the most progressive dealer (i.e., disagreeing with these statements resulted a high score). The actual scores ranged from 5 through 19.

The intercorrelations among the items, the item-total correlations and the reliability of the scale are indicated in Table 5. The item intercorrelations ranged from .2363 to .6020 and the item-total correlations ranged from .6162 to .7960. The reliability of the scale was .6647. The four items were used as a scale to measure progressivism. It was felt that they provided a better measure of progressivism than would have been provided by fewer items.

Table 5. Progressivism -- item intercorrelations and item-total correlations$^a,b$  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-----</td>
<td>.2437</td>
<td>.4096</td>
<td>.2363</td>
<td>.6691</td>
</tr>
<tr>
<td>2</td>
<td>-----</td>
<td>.2366</td>
<td>.2601</td>
<td>.6162</td>
<td>.6162</td>
</tr>
<tr>
<td>3</td>
<td>-----</td>
<td>-----</td>
<td>.6020</td>
<td>.7960</td>
<td>.7960</td>
</tr>
<tr>
<td>4</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>.7430</td>
</tr>
</tbody>
</table>

$^a$The .01 significance level for 79 cases is $r = .2617$ and the .05 level is $r = .1866$.

$^b$The reliability of this four item scale is .6647.
Value placed on security (risk aversion)  The value placed on security refers to the relative lack of willingness of farm machinery dealers to take risks. A three item scale was assumed to measure the relative value placed on security. The items included the following:

1. It is better to make a smaller profit each year than to attempt something where there is a chance of losing.

2. A machinery dealer should try to reduce the risks or uncertainty in operating his business by handling a number of product lines even though it may mean the loss of some future income.

3. Young people today are too willing to take chances because they have forgotten how tough times can be.

Each dealer received a score from 1 to 5 for each of these items. The scores were then summed for each item. The scores were assigned in such a way that a score of 15 was assumed to indicate a dealer who placed the highest value on security while a score of 3 indicated a low value placed on security (i.e., agreeing with these statements resulted in a high score). The scores actually ranged from 3 through 15.

The intercorrelations among the items, the item-total correlations and the reliability of the scale are indicated in Table 6. The inter-item correlations ranged from .2365 to .3536 and the item-total correlations ranged from .7074 to .7608. The reliability was .5645. Even though the reliability was not as high as was desired, it was assumed that the three item scale was a better measure of the value placed on security than would have been provided by fewer items.
Table 6. The value placed on security -- item intercorrelations and item-total correlations\textsuperscript{a,b}

\begin{tabular}{cccc}
\hline
 & 1 & 2 & 3 \\
\hline
1 & ----- & .3151 & .2365 & .7074 \\
2 & ----- & .3536 & .7608 \\
3 & ----- & .7250 \\
\hline
\end{tabular}

\textsuperscript{a}The .01 significance level for 79 cases is $r = .2617$ and the .05 level is $r = .1866$.

\textsuperscript{b}The reliability of this three item scale is .5645.

\textsuperscript{c}1/\sqrt{3} = .5773.

\textbf{Value placed on economic goals} The relative value placed on economic goals by farm machinery dealers was measured by the degree of their agreement with the following statement:

\begin{quote}
Material success is a very important goal in life.
\end{quote}

The range of possible scores was from 1, for dealers who strongly disagreed, through 5, for dealers who strongly agreed. The actual scores ranged from 1 through 5.

\textbf{Value placed on non-economic goals} In addition to the value placed on economic goals, the value placed on other non-economic goals was also measured. The degree of the dealers' agreement with the following statement was assumed to measure the relative value placed on non-economic goals:

\begin{quote}
Having a lot of friends is a more important goal in life than being a success financially.
\end{quote}
The actual scores for agreement with the above statement ranged from 1, for strongly disagree, through 5, for strongly agree. The correlation between the relative value placed on economic goals and the relative value placed on non-economic goals was -.213. (The correlation coefficients for all of the intercorrelations between all of the empirical measures used in this thesis are indicated in Table 16 in the Appendix.)

**Value placed on approval of peers**  The value placed on approval of peers refers to a concern for conforming to the expectations of others in order to win their approval. The dealers' agreement with the following statement was assumed to measure the relative value placed on approval of peers:

> If I were really truthful with myself it is very important to me that other businessmen in the community approve of the way I run my business.

The actual scores for agreement with the above statement ranged from 1, for strongly disagree, through 5, for strongly agree.

**Value placed on independence in decision-making**  The degree of agreement by farm machinery dealers with the following statement was assumed to measure the relative value placed on independence in decision-making:

> One of the greatest lessons a young man can learn is to make his own decisions.

All of the farm machinery dealers responded that they either agreed or strongly agreed with the above statement.

**Value placed on keeping informed**  Three different measures were used to measure the relative value placed on keeping informed.
The first measure pertained to the importance assigned to keeping informed on product information. The following question was asked:

1. How important do you think it is for a dealer to keep up with the latest product information? -- absolute necessity, very important, important, not very important.

The dealers' responses were scored from 1 through 4. Not very important was scored 1, and absolute necessity was scored 4. The actual scores ranged from 2 through 4.

The importance of keeping informed on management practices was also measured. The following question was asked:

How important do you think it is for a dealer to keep up with the latest management practices? -- absolute necessity, very important, important, not very important.

The dealers' responses were scored from 1 through 4. Not very important was scored 1 and absolute necessity was scored 4. The actual scores ranged from 1 through 4.

The third measure of the relative value placed on keeping informed pertained to the willingness of dealers to obtain information on business management, sales techniques and product information by attending a training session. The following question was asked:

If you had an opportunity to attend a week long training program devoted to training in basic business management practices and sales techniques as well as product information on farm machinery, would you: most certainly attend, certainly attend, probably attend, probably not attend, certainly not attend.

The dealers' responses were scored from 1, for certainly not attend, through 5, for most certainly attend. The actual scores ranged from 1 through 5.
Table 7. Intercorrelations among the three measures of value placed on keeping informed

<table>
<thead>
<tr>
<th>First measure</th>
<th>Second measure</th>
<th>Third measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>First measure</td>
<td>.3976</td>
<td>.2773</td>
</tr>
<tr>
<td>Second measure</td>
<td>.4260</td>
<td></td>
</tr>
<tr>
<td>Third measure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The .01 significance level for 79 cases is $r = .2617$ and the .05 level is $r = .1866$.

How important do you think it is for a dealer to keep up with the latest product information?

How important do you think it is for a dealer to keep up with the latest management practices?

If you had an opportunity to attend a week long training program devoted to training in basic business management practices and sales techniques as well as product information on farm machinery, would you: most certainly attend, certainly attend, probably attend, probably not attend, certainly not attend.

The intercorrelations among the three measures of the value placed on keeping informed are indicated in Table 7. The highest intercorrelation was between the two measures which involved the importance placed on keeping informed on management practices.

Value placed on influencing farmers' decisions The value placed on influencing farmers' decisions refers to whether or not the dealers thought they should try to influence farmers' decisions on machinery purchase and use. The following question was used to measure this:

Do you think you should try to influence the farmers' decisions about which size of tractor to purchase?
most certainly should, certainly should, probably should, probably should not, should not.

The dealers' responses were scored from 1, for should not, to 5, for most certainly should. The actual scores ranged from 1 through 5.

Age The following question was used to measure age:

What is your age?

The ages of the dealers in the sample ranged from 22 through 69 years. The interquartile range was from 39.75 through 53 years. The mean age of the dealers was 46.8 years.

Formal education In the development of Specific Hypothesis 12 it was indicated that two main functions of formal education are to impart knowledge and to teach students to think effectively. Not all persons acquire the same information and skills in any given number of years of formal schooling. On the average, however, it is assumed that what a person learns in school is closely related to the number of years he attends school. The following question was used to measure formal education:

What is the last grade of school you completed?

The range in number of grades completed was from 3 through 16. Sixteen of the seventy-nine dealers had completed eight or less grades of school, 44 had completed some high school but no college (34 of the 44 graduated from high school), and 19 had completed one or more years of college (three of the dealers were college graduates). The average number of grades completed was 11.4. Number of grades completed was related negatively with age for the dealers in the sample (r = -.322).

Management experience Just as not all persons acquire the same
information and skills in any given number of years of formal education, neither can they be expected to learn the same things and have the same experiences in a given time period of management activities. The experience and the situations encountered are different for each of them. In general, however, the longer a person has been the manager of a farm machinery business the more experiences he will have had which should provide insights into future situations. The following question was used to measure management experience:

How many years have you been the manager of a farm machinery business?

The actual number of years of management experience for the dealers in the sample ranged from 1 through 40. The interquartile range was 6 through 18.25 years. The mean number of years was 14.2. Number of years of management experience was related positively to age ($r = .653$) and negatively to number of grades of school completed ($r = -.124$).

This completes the listing of the measures of the personality system variables. The measures of the social system variables are presented below.

**Measures of social system variables (facilities and resources)**

The social system variables which are emphasized in this thesis are facilities and resources. Three specific aspects of facilities and resources were hypothesized to be related to economic success of farm machinery dealerships. These were number of employees, financial resources, and line of products.

**Number of employees** The following question was used to measure
the number of employees in the farm machinery dealerships:

Including yourself, how many people work in this business full-time?

The number of employees in the dealerships in the sample ranged from 1 through 24. Forty-nine of the 79 dealerships had less than six employees. Only five of the dealerships had more than 12 employees. The mean number of employees was 5.9. In order to reduce the effect of the extreme values on the correlation coefficients, the five dealerships with 13 through 24 employees were each coded as having 13 employees for the correlation analysis.

Financial resources Financial resources refer to the capital which the farm machinery dealer has available to use as a means to the attainment of system goals. Various indicies could be used to measure this. Among these are total capital managed during the year, the total assets of the business and the net worth of the business. Net worth of the business was selected to measure financial resources in this thesis. The net worth represents not only the investment of the owners in the business but, also, to some extent, the collateral which they have available for use in borrowing additional funds.

The following two questions were used in measuring net worth:

What were the total assets of your business at the time that the last balance sheet was drawn up?

What were the total liabilities of your business at the time this balance sheet was drawn up?

Net worth as a measure of financial resources was assumed to be equal to the difference between the figures given in response to the two questions above. The responses were all rounded to the nearest
one hundred dollars. The figures ranged from 3,000 through 372,000 dollars. Forty-one of the 79 dealerships each had a net worth of 50,000 dollars or less. Nine of the dealerships each had a net worth of 130,000 or more. In order to reduce the effect of the extreme values on the correlation coefficients the nine dealerships with net worth of 130,000 or more were each coded as having a net worth of 130,000 for the correlation analysis.¹ The median value of 49,100 dollars was assigned to seven dealerships for which data were not available.

**Line of products** In the discussion preceding Specific Hypothesis 17 it was suggested that the popularity of the main line of machinery sold by a dealer might be related to economic success of the dealership. In this case popularity refers to the willingness of farmers to purchase the line of machinery, as indicated by actual ownership of the various brands of machines. The following questions were used in measuring the line of machinery sold:

What are the brands of tractors which you sell?

If the dealer said he sold more than one brand of tractors he was also asked:

...you have indicated you sell more than one brand of new tractors. Which brand of new tractors accounts for your largest dollar volume of tractor sales in a year?

Eight brands were sold by the dealers. Each of these brands was

¹Another way to reduce the effect of the extreme values would be to code the rank order of the dealerships for net worth, rather than the net worth figures with the top end grouped. For this sample these two codes were highly correlated (r = .971). Only the code with the top end grouped was used.
assigned a score from 1 through 8, based on ownership of the brand by the farmers who were interviewed in the farmer phase of the farm machinery study. Approximately 27 percent and 35 percent of the tractors owned by the farmers were of the brands receiving scores of 7 and 8, respectively.

The percent of the dealers in the sample who sold each of the lines of machinery as their major tractor line is indicated in Table 8.

Table 8. Percent of dealers who sold each line of machinery as their major tractor line

<table>
<thead>
<tr>
<th>Popularity score of the brand based on ownership by farmers</th>
<th>Dealers who sold the brand as their major tractor line</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td></td>
<td>20</td>
<td>25.3</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>17</td>
<td>21.5</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>12</td>
<td>15.2</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>3</td>
<td>3.8</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>7</td>
<td>8.9</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>3</td>
<td>3.8</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>9</td>
<td>11.4</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>8</td>
<td>10.1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>79</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Measures of activities of managers

The activities of managers which are emphasized in this thesis include management activities, sales activities and information seeking activities.

Time spent in management activities Managers of retail firms vary both in the amount of time which they devote to management activities and in the quality of their management performance. (Quality of performance, however, is probably associated with the amount of time spent.) The concern of Specific Hypothesis 19 is with the relative amount of time spent in management and supervision. This was measured by the following item on the interview schedule:

What percent of the time that you devote to this business do you spend working in each of the categories below? -- Management and supervision, office help, sales, partsman, mechanic, service other than mechanic, other.

The range in the percent of time spent in management and supervision for the dealers in the sample was from 5 percent to 100 percent. Slightly over half of the dealers indicated that they spent between 10 and 40 percent of their time in management and supervision was approximately 40 percent.

Time spent in sales activities The interview schedule item that was used to measure time spent in management and supervision activities was also used to measure time spent in sales activities.

The range in the percent of time spent in sales activities was from 0 percent to 70 percent. Six of the 79 dealers in the sample indicated that they didn't spend any of their time in sales activities. Over half of the dealers indicated they spent between 10 and 35 percent
of their time in sales activities. The mean percent of time spent in sales activities was 31 percent.

**Number of information sources used**

Specific Hypothesis 21 suggested a relationship between the relative number of information sources used and economic success. The following item was used to measure the number of information sources used:

*Which of these sources of information do you use in keeping informed about farm machinery?*

The respondents were each given a card containing a list of 29 different information sources. The list included such information sources as manufacturers publications; machinery industry publications: Implement and Tractor, Tractor Redbook, etc.; USDA publications; farm magazines: Successful Farming, Wallaces Farmer, Farm Journal, etc.; television; farmers; company sales meetings; etc.

The number of information sources used by the respondents ranged from 4 through 28. The interquartile range was from 11 through 19. The mean number of information sources that the dealers indicated they used was 15.2.

This concludes the listing of the operational measures used in testing the specific hypotheses. The statistical tests used to test the specific hypotheses are discussed briefly in the following section.

**Statistical Analysis**

Twenty-three specific hypotheses were developed in the preceding chapter. Eighteen of these were hypotheses of relationships involving
two main variables (they were hypotheses of zero order relationship) and five of them suggested relationships involving a weighted combination of variables (they were hypotheses of multiple relationship). All of them were hypotheses of linear relationship between variables. The direction of the relationship was predicted for each of the hypotheses of zero order relationship.

It was suggested in the previous section that it was necessary to operationalize the main variables in the specific hypotheses before they could be tested. By substituting the various measures developed in the previous section for the variables they operationalized, it was possible to derive empirical hypotheses from the specific hypotheses. These empirical hypotheses were tested by means of statistical tests. The actual empirical hypotheses, which were derived from the specific hypotheses, are listed in the findings section. Each is stated below the specific hypotheses to which it pertains. There are a total of 50 empirical hypotheses.

Both zero order correlations and multiple correlations were used in testing the empirical hypotheses in this thesis.

The (zero order) correlation between two measures is an indication of the degree of linear relationship between them. It is a measure of the spread about a regression line (11). The zero order relationships were each tested by testing for significance of the computed coefficient of correlation between the two measures involved. If the value of a correlation coefficient was greater than would have been expected five percent of the time due to chance alone, it was considered
to be statistically significant. A significant correlation between two measures is accepted as evidence in support of the empirical hypothesis. For a sample of size \( N = 79 \) a correlation coefficient of \( .187 \) is significant at the .05 level of probability and a correlation coefficient of \( .262 \) is significant at the .01 level of probability for a one tail test (direction predicted).

The multiple correlation between a set of independent variables and a dependent variable is an indication of linear relationship between the weighted independent variables and the dependent variable. It is a measure of the spread about a multiple regression line. According to Walker and Lev (120, p. 326; 122, p. 198) the coefficient of multiple correlation (\( R \)) can be calculated according to the following equation:

\[
R_{y.12...n} = \sqrt{\frac{\sum r_{y1}b^*_{y1.23...n} + \sum r_{y2}b^*_{y2.13...n} + \ldots + \sum r_{yn}b^*_{yn.12...n-1}}}
\]

In this equation \( r_{yi} \) is the correlation between the \( i \) th independent variable and the dependent variable. The \( b^* \) values (beta weights) represent the standard form weights for the respective independent variables.\(^1\) The product of \( r_{y1} \) and \( b_{y1.23...n} \) represents the contribution of independent variable 1 to \( R^2 \) when the other independent variables are held constant. It is an estimate of the amount of variance in the dependent variable which is "explained" by variable 1 (122).

\[b^* = b \frac{S_x}{S_y} \] (11, p. 345; 122, p. 199).
F tests were used to test for the significance of the multiple correlation coefficients \( R_{y.12...n} \). The following formula has been suggested by Walker and Lev (120, p. 324) and by Blalock (11, p. 355):

\[
F_{K, N-K-1} = \frac{R^2}{1-R^2} \cdot \frac{N-K-1}{K}
\]

Where \( N \) is the sample size and \( K \) is the number of predictor variables.

If a value of \( F \) was greater than would have been expected five percent of the time due to chance alone, it was considered to be statistically significant. A significant \( F \) value is accepted as evidence in support of a relationship between the weighted combination of independent variables and the dependent variable.

"Shrunken" values of multiple correlation coefficients \( R' \) were also calculated. The values of \( R' \) 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 \( R' \) were 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 (27a, p. 153).

There are certain assumptions which should be met, or at least approximated, when correlation and multiple correlation are used as tests of significance. First the observations should be random and
independent. This assumption is assumed to be satisfied by the sampling procedures used.

Other assumptions are more questionable for the data in the farm machinery dealer study. These are the assumptions that the variables are measured by interval scales and assumptions about the distributions of the variables. For zero order correlation a bivariate normal distribution is assumed. For multiple correlation and multiple regression it is assumed that the X's are fixed and measured without error. It is assumed that for every combination of fixed X's there is a distribution of Y's. The Y's are assumed to be normally distributed and their variances are assumed to be homogeneous. These assumptions, especially the assumption that the X's are fixed and measured without error, are not necessarily all met by the data in this thesis.

Although the measures of cognitive elements are probably more accurately described as ordinal scales than as interval scales, it is assumed that they approximate interval scales. Various of the measures were coded in such a way as to increase their interval properties. The extreme values of some of the variables were coded in such a way as to reduce their effect on the correlation coefficients, increase normality, and decrease the variance. As was indicated earlier, twenty-two interview schedules containing data of questionable accuracy were eliminated from the analysis. Thus, an effort has been made to decrease the error in measurement of the variables and to bring the measures more nearly in line with the assumptions of zero order and multiple correlation analysis.
Due to the limitations of the data relative to the assumptions of correlation and multiple correlation, the findings for the various hypotheses have been interpreted carefully in this thesis. In general, however, it is assumed that the statistical tests are good indicators of the probability of actual relationships in the population from which the sample was drawn. The findings are presented in the following chapter.
FINDINGS

Introduction

The various levels of propositions and hypotheses (above the empirical level) and the operational measures of the main concepts in the specific hypotheses have now been presented. In this chapter empirical hypotheses relevant to the various specific hypotheses are stated and tested. Each empirical hypothesis pertains to a particular specific hypothesis and contains operational measures of the main concepts in that specific hypothesis.

The theoretical propositions, general hypotheses and specific hypotheses are presented in the following pages in the same order that they were developed. Two or more empirical hypotheses are stated for each specific hypothesis. Findings relative to the hypotheses are presented.

Statement and Tests of Theoretical Propositions,
General Hypotheses, Specific Hypotheses and Empirical Hypotheses

Personality system

The following proposition, hypotheses and findings pertain to the personality systems of managers of retail firms and to economic success of the firms they manage.

1The mode of presenting the findings in this thesis is similar to that of Warland (122) and Hobbs (40).
Theoretical Proposition 1: Personality systems of managers of retail firms are related to the economic success of the firms they manage.

General Hypothesis 1: Certain relevant cognitive elements of managers of retail firms are related to the economic success of the firms they manage.

Specific Hypothesis 1: The relative value placed on mental activity by farm machinery dealers is related positively to the economic success of the firms they manage.

E.H. 1: The score on the mental activity scale is related positively to net income. The hypothesis stated in its null form is: There is no positive relationship between score on the mental activity scale and net income. The computed correlation coefficient is .230 which is significant beyond the .05 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 2: The score on the mental activity scale is related positively to total dollar volume of sales and service. The hypothesis stated in its null form is: There is no positive relationship between score on the mental activity scale and total dollar volume of sales and service. The computed correlation coefficient is .363 which is significant beyond the .005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 1 was tested by two empirical hypotheses. Both of these hypotheses were supported by the data. The data, therefore, support the specific hypothesis of a positive relationship between the value placed on mental activity by farm machinery dealers and economic success of the firms they manage.

Specific Hypothesis 2: The relative progressivism of farm machinery dealers is related positively to the economic success of the firms they manage.
E.H. 3: The score on the progressivism scale is related positively to net income. The hypothesis stated in its null form is: There is no positive relationship between score on the progressivism scale and net income. The computed correlation coefficient is .270 which is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 4: The score on the progressivism scale is related positively to total dollar volume of sales and service. The hypothesis stated in its null form is: There is no positive relationship between the progressivism scale and total dollar volume of sales and service. The computed correlation coefficient is .233 which is significant beyond the .05 level. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 2 was tested by two empirical hypotheses. Both of these empirical hypotheses were supported. The data, therefore, support the specific hypothesis of a positive relationship between progressivism of farm machinery dealers and economic success of the firms they manage.

Specific Hypothesis 3: The relative value placed on security (risk aversion) by farm machinery dealers is related negatively to the economic success of the firms they manage.

E.H. 5: The score on the security scale is related negatively to net income. The hypothesis stated in its null form is: There is no negative relationship between score on the security scale and net income. The computed correlation coefficient is -.268 which is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 6: The score on the security scale is related negatively to total dollar volume of sales and service. The hypothesis stated in its null form is: There is no negative relationship between score on the security scale and total dollar volume of sales and service. The computed correlation coefficient is -.158 which is significant beyond the .10 level but not at the .05 level of probability. The null hypothesis is not refuted. These data
fail to support the empirical hypothesis at the .05 level of probability.

Specific Hypothesis 3 was tested by two empirical hypotheses. One was supported beyond the .05 level and the other was not. Both relationships were in the predicted direction and were beyond the .10 level of probability. The data, therefore, provide limited support for the specific hypothesis of a negative relationship between the value placed on security by farm machinery dealers and economic success of the firms they manage.

Specific Hypothesis 4: The relative value placed on economic goals by farm machinery dealers is related positively to the economic success of the firms they manage.

E.H. 7: The score on the economic goals item is related positively to net income. The hypothesis stated in its null form is: There is no significant positive relationship between score on the economic goals item and net income. The computed correlation coefficient is -.153 which is not significant. The null hypothesis is not refuted. These data fail to support the empirical hypothesis.

E.H. 8: The score on the economic goals item is related positively to total dollar volume of sales and service. The null hypothesis is: There is no significant relationship between score on the economic goals item and total dollar volume of sales and service. The computed correlation coefficient is -.071 which is not significant. The null hypothesis is not refuted. These data fail to support the empirical hypothesis.

Specific Hypothesis 4 was tested by two empirical hypotheses. Neither empirical hypothesis was supported. The data, therefore, do not support the specific hypothesis of a positive relationship between the value placed on economic goals by farm machinery dealers and the economic success of the firms they manage.
Specific Hypothesis 5: The relative value placed on non-economic goals by farm machinery dealers is related negatively to the economic success of the firms they manage.

E.H. 9: The score on the non-economic goals item is related negatively to net income. The null hypothesis is: There is no negative relationship between score on the non-economic goals item and net income. The computed correlation coefficient is -.100 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

E.H. 10: The score on the non-economic goals item is related negatively to total dollar volume of sales and service. The null hypothesis is: There is no negative relationship between score on the non-economic goals item and total dollar volume of sales and service. The computed correlation coefficient is -.062 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 5 was tested by two empirical hypotheses. Neither empirical hypothesis was supported. (In both cases, however, the relationship was in the hypothesized direction.) The data do not support the specific hypothesis of a negative relationship between the value placed on non-economic goals by farm machinery dealers and the economic success of the firms they manage.

Specific Hypothesis 6: The relative value placed on the approval of peers by farm machinery dealers is related negatively to the economic success of the firms they manage.

E.H. 11: The score on the approval-of-peers item is related negatively to net income. The null hypothesis is: There is no negative relationship between score on the approval-of-peers item and net income. The correlation coefficient is -.164 which is significant beyond the .10 level but not beyond the .05 level of probability. The null hypothesis is not refuted. These data do not support the empirical hypothesis at the .05 level of probability.
E.H. 12: The score on the approval-of-peers item is related negatively to total dollar volume of sales and service. The null hypothesis is: There is no negative relationship between score on the approval-of-peers item and total dollar volume of sales and service income. The correlation coefficient is -.064 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 6 was tested by two empirical hypotheses. Neither empirical hypothesis was supported at the .05 level of probability. Both were in the predicted direction and one was significant beyond the .10 level of significance. The data, therefore, provide only very limited support for the specific hypothesis of a negative relationship between the value placed on approval of peers by farm machinery dealers and the economic success of the firms they manage.

Specific Hypothesis 7: The relative value placed on independence in decision-making by farm machinery dealers is related positively to the economic success of the firms they manage.

E.H. 13: The score on the independence item is related positively to net income. The null hypothesis is: There is no positive relationship between score on the independence item and net income. The computed correlation coefficient is .019 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

E.H. 14: The score on the independence item is related positively to net income. The null hypothesis is: There is no positive relationship between score on the independence item and total dollar volume of sales and service. The computed correlation coefficient is .009 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 7 was tested by two empirical hypotheses. Neither empirical hypothesis was supported. The data do not support the specific hypothesis of a relationship between the value placed on
independence in decision-making by farm machinery dealers and the economic success of the firms they manage.

**Specific Hypothesis 8:** The relative value farm machinery dealers place on keeping informed is related *positively* to the economic success of the firms they manage.

**E.H. 15:** The score for perceived importance of latest product information is related positively to net income. The null hypothesis is: There is no positive relationship between the score for perceived importance of latest product information and net income. The computed correlation coefficient is .174 which is significant beyond the .10 level but not beyond the .05 level of probability. The null hypothesis is not refuted. The data do not support the empirical hypothesis at the .05 level of probability.

**E.H. 16:** The score for perceived importance of latest product information is related positively to total dollar volume of sales and service. The null hypothesis is: There is no negative relationship between the score for perceived importance of latest product information and total dollar volume of sales and service. The computed correlation coefficient is .230 which is significant beyond the .05 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

**E.H. 17:** The score for perceived importance of keeping up with latest management practices is related positively to net income. The null hypothesis is: There is no positive relationship between the score for perceived importance of keeping up with latest management practices and net income. The computed correlation coefficient is .072 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

**E.H. 18:** The score for perceived importance of keeping up with latest management practices is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the score for perceived importance of keeping up with latest management practices and total dollar volume of sales and service. The computed correlation coefficient is .348 which is significant beyond the
.005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 19: The score for willingness to attend a training session is related positively to net income. The null hypothesis is: There is no positive relationship between the score for willingness to attend a training session and net income. The computed correlation coefficient is -.008 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

E.H. 20: The score for willingness to attend a training session is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the score for willingness to attend a training session and total dollar volume of sales and service. The computed correlation coefficient is .298 which is significant beyond the .005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 8 was tested by six empirical hypotheses. Three of the empirical hypotheses involved the measure of net income. None of these were significant at the .05 level of probability. They were all in the hypothesized direction, however, and one was significant beyond the .10 level of probability. The other three empirical hypotheses involved the measure of total dollar volume of sales and service. Each of these empirical hypotheses was supported beyond the .05 level of probability (two were supported beyond the .005 level). The data, therefore, provide limited support for the specific hypothesis of a relationship between the value farm machinery dealers placed on keeping informed and the economic success of the firms they manage.

Specific Hypothesis 9: The relative value farm machinery dealers place on influencing farmers' decisions is related positively to the economic success of the firms they manage.
E.H. 21: The score for perceived importance of influencing farmers' tractor purchase decisions is related positively to net income. The null hypothesis is: There is no positive relationship between the score for perceived importance of influencing farmers' tractor purchase decisions and net income. The computed correlation coefficient is .239 which is significant beyond the .05 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 22: The score for perceived importance of influencing farmers' tractor purchase decisions is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the score for perceived importance of influencing farmers' tractor purchase decisions and total dollar volume of sales and service. The computed correlation coefficient is .282 which is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 9 was tested by two empirical hypotheses. Both of these empirical hypotheses were supported. These data support the specific hypothesis of a relationship between the value farm machinery dealers place on influencing farmers' decisions and the economic success of the firms they manage.

Specific Hypothesis 10: A weighted combination of certain cognitive elements of farm machinery dealers is related to economic success of the firms they manage.

E.H. 23: There is a correlation between a weighted combination of the 11 scores for cognitive elements and net income. This hypothesis stated in its null form is: There is no correlation between a weighted combination of the 11 scores for cognitive elements and net income. The computed F value is 1.75 with 11 and 67 degrees of freedom. This is not significant at the .05 level of probability. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

The computed value of R for E.H. 23 is .4724 and the value of $R^2$ is .2232. The 11 scores account for less than 23 percent of the
variance in net income.

E.H. 24: There is a correlation between a weighted combination of the 11 scores for cognitive elements and total dollar volume of sales and service. This hypothesis stated in its null form is: There is no correlation between a weighted combination of the 11 scores for cognitive elements and total volume of sales and service. The computed F value is 2.95 with 11 and 67 degrees of freedom. This is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

The computed value of R for E.H. 24 is .5710 and the value of $R^2$ is .3261. The eleven measures of cognitive elements, thus, "explain" approximately 33 percent of the variance in total dollar volume of sales and service.¹ The contribution of each of the 11 scores to the total $R^2$ is indicated in Table 9. The measure of value placed on mental activity had the highest zero order relationship with total dollar volume of sales and service. This measure accounts for over one-third of the variance explained by the eleven variables. Other variables with zero order correlation coefficients significant beyond the .01 level, which also accounted for relatively more of the explained variation than other variables, include value placed on influencing farmers' decisions and two measures of value placed on keeping informed: perceived importance of information on management practices and willingness to attend a week long training session.

Specific Hypothesis 10 was tested by two empirical hypotheses. One of these was supported and the other was not. These data provide limited support for the specific hypothesis of a relationship between a weighted combination of cognitive elements of farm machinery dealers and the economic success of the firms they manage.

¹The proportion of variance reported as "explained" is the proportion of the variance explained in the sample used in this thesis. The proportion of the variance explained in future samples from the same population would be less than the $R^2$ value and is estimated by the "shrunken" $R^2$. For Table 9 $R^2 = .3261$ and the "shrunken" $R^2 = (.4642)^2 = .2155$. 
Table 9. Regression weights and correlations of personality system variables used in computation of multiple correlation coefficients for total dollar volume of sales and service

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>b*</th>
<th>( r_y )</th>
<th>(b*)(r_y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value placed on mental activity</td>
<td>.3157</td>
<td>.3633</td>
<td>.1147</td>
</tr>
<tr>
<td>Progressivism</td>
<td>.1456</td>
<td>.2332</td>
<td>.0340</td>
</tr>
<tr>
<td>Value placed on security</td>
<td>-.0031</td>
<td>-.1579</td>
<td>.0005</td>
</tr>
<tr>
<td>Value placed on economic goals</td>
<td>-.0231</td>
<td>-.0713</td>
<td>.0016</td>
</tr>
<tr>
<td>Value placed on non-economic goals</td>
<td>.0224</td>
<td>-.0623</td>
<td>-.0014</td>
</tr>
<tr>
<td>Value placed on approval of peers</td>
<td>-.0702</td>
<td>-.0637</td>
<td>.0045</td>
</tr>
<tr>
<td>Value placed on independent decision-making</td>
<td>.0215</td>
<td>.0085</td>
<td>.0002</td>
</tr>
<tr>
<td>Value placed on influencing farmers' decisions</td>
<td>.2007</td>
<td>.2819</td>
<td>.0566</td>
</tr>
</tbody>
</table>

Willingness to attend a training session                    | .1832| .2975    | .0545    |

Perceived importance of information on management practices| .1800| .3484    | .0627    |

Perceived importance of latest product information          | -.0079| .2303  | -.0018   |

**Total**                                                   |       |          |          |

\[ R^2 = .3261 \]

\[ R = .5710 \]

\[ R' = .4642^a \]

\^a\ R' is a "shrunken" R. R' provides an estimate of what the value of R would be if the effects of correlated error were eliminated. The value of R' was 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 predictors (27a, p. 153).
General Hypothesis 1 suggests that certain relevant cognitive elements of managers of retail firms are related to the economic success of the firms they manage. Ten specific hypotheses were derived from this general hypothesis. It was concluded that three of the specific hypotheses were not supported by the data, one received very limited support, three received limited support and three were supported. Thus, while not all of the cognitive element variables which were hypothesized to be related to economic success were significantly related, some of them were. The relationships involving the value placed on mental activity, progressivism, value placed on influencing farmers' decisions and the value placed on keeping informed received the most support.

These data for farm machinery dealers, then, are assumed to provide limited support for the general hypotheses of relationships between certain relevant cognitive elements of managers of retail firms and economic success of the firms.

General Hypothesis 2: Certain relevant background characteristics of managers of retail firms are related to the economic success of the firms they manage.

Specific Hypothesis 11: The relative age of farm machinery dealers is related negatively to the economic success of the firms they manage.

E.H. 25: Age in years is related negatively to net income. The null hypothesis is: There is no negative relationship between age in years and net income. The computed correlation coefficient is .028 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.
E.H. 26: Age in years is related negatively to total dollar volume of sales and service. The null hypothesis is: There is no negative relationship between age in years and total dollar volume of sales and service. The computed correlation coefficient is -.041 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 11 was tested by two empirical hypotheses. Neither of them were supported by the data. The data, therefore, do not support the specific hypothesis of a negative relationship between age of farm machinery dealers and the economic success of the firms they manage.

In the development of Specific Hypothesis 11 it was indicated that the relationship between age and economic success might be a curvilinear rather than a linear relationship. The data provide only limited support for this contention. Table 10, comparing age with total dollar volume of sales and service, indicates a curvilinear trend for the dealers in the sample. The relationship, however, was not statistically significant. The curvilinear trend between age and net income was even less evident.

Specific Hypothesis 12: The relative education of farm machinery dealers is related positively to the economic success of the firms they manage.

E.H. 27: Number of grades of school completed is related positively to net income. The null hypothesis is: There is no positive relationship between number of grades of school completed and net income. The computed correlation coefficient is .176 which is significant beyond the .10 level but not at the .05 level. The null hypothesis is not refuted. The data do not support the empirical hypothesis at the .05 level of probability.
Table 10. Total dollar volume of sales and service for dealers in three categories of age

<table>
<thead>
<tr>
<th>Total volume of sales and service in dollars</th>
<th>Age in years</th>
<th>22-42</th>
<th>43-51</th>
<th>52-69</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 225,000</td>
<td></td>
<td>16</td>
<td>12</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td>Over 225,000</td>
<td></td>
<td>8</td>
<td>17</td>
<td>11</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24</td>
<td>29</td>
<td>26</td>
<td>79</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 3.43 \text{ with two degrees of freedom; not significant} \]

Average total volume of sales and service in dollars

<table>
<thead>
<tr>
<th></th>
<th>22-42</th>
<th>43-51</th>
<th>52-69</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\text{Less than 225,000}$</td>
<td>244,210</td>
<td>287,310</td>
<td>232,650</td>
<td>256,200</td>
</tr>
</tbody>
</table>

\[ ^a \text{One of the dealers in the 43-51 years of age category had total dollar volume of sales and service of 1,138,000. If this extreme value is left out the average for the remaining 28 dealers in this category is 256,930 dollars.} \]

E.H. 28: Number of grades of school completed is related positively to total dollar volume of sales and service. The null hypothesis is: There is no significant relationship between number of grades of school completed and total dollar volume of sales and service. The computed correlation coefficient is .208 which is significant beyond the .05 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 12 was tested by two empirical hypotheses. One of these was supported beyond the .05 level of probability. The other was significant beyond the .10 level of probability. These data provide limited support for the specific hypothesis that education of
farm machinery dealers is related positively to the economic success of the firms they manage.

**Specific Hypothesis 13**: The relative management experience of farm machinery dealers is related positively to the economic success of the firms they manage.

E.H. 29: Number of years as manager of a farm machinery business is related positively to net income. The null hypothesis is: There is no significant positive relationship between number of years as manager of a farm machinery business and net income. The computed correlation coefficient is .198 which is significant beyond the .05 level. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 30: Number of years as manager of a farm machinery business is related positively to total dollar volume of sales and service. The null hypothesis is: There is no significant relationship between number of years as manager of a farm machinery business and total dollar volume of sales and service. The computed correlation coefficient is .043 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 13 was tested by two empirical hypotheses. One of these hypothesis was supported at the .05 level of probability and the other was not supported. These data provide limited support for the specific hypothesis that management experience of farm machinery dealers is related positively to the economic success of the firms they manage.

General Hypothesis 2 suggests that certain relevant background characteristics of managers of retail firms are related to the economic success of the firms they manage. Three specific hypotheses were derived from this general hypothesis. These three specific hypotheses were each tested by two empirical hypotheses. One of the specific
hypotheses was not supported while the other two each received limited support. These data then provide limited support for General Hypothesis 2. The data indicate that education and years of management experience are each more highly related to economic success than is age.

Specific Hypothesis 14: A weighted combination of certain cognitive elements and background characteristics of farm machinery dealers is related to the economic success of the firms they manage.

E.H. 31: There is a correlation between a weighted combination of the 14 measures of cognitive elements and background characteristics of farm machinery dealers and net income. The null hypothesis is: There is no correlation between a weighted combination of the 14 measures of cognitive elements and background characteristics of farm machinery dealers and net income. The computed F value is 1.52 with 14 and 64 degrees of freedom. This is not significant. The null hypothesis is not refuted. The data do not support the empirical hypothesis.

The computed value of R for E.H. 31 is .500 and the value of $R^2$ is .2500. The 14 measures of cognitive elements and background characteristics account for only about one-fourth of the variance in net income.

E.H. 32: There is a correlation between a weighted combination of the 14 measures of cognitive elements and background characteristics of farm machinery dealers and total dollar volume of sales and service. The null hypothesis is: There is no correlation between a weighted combination of the 14 measures of cognitive elements and background characteristics of farm machinery dealers and total dollar volume of sales and service. The computed F value is 2.24 with 14 and 64 degrees of freedom. This is significant beyond the .05 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

The computed value of R for E.H. 32 is .5736 and the value of $R^2$ is .3290. The addition of the three measures of background
characteristics only increased the value of $R^2$ from .3260 for E.H. 24 to .3290 for E.H. 32.

Specific Hypothesis 14 was tested by two empirical hypotheses. One of them was supported and the other was not. These data provide limited support for the specific hypotheses. The three measures of background characteristics, however, "explain" little of the variance in total dollar volume of sales and service that isn't already "explained" by the cognitive elements.

The two general hypotheses and the ten specific hypotheses listed above were all derived from Theoretical Proposition 1. Theoretical Proposition 1 states that personality systems of managers of retail firms are related to the economic success of the firms they manage. This proposition is very general. The isolation of any predicted relationships between personality system variables and economic success provides support for the proposition. The important thing is to isolate which factors are related to economic success. The data indicate that the value placed on mental activity, progressivism, the value placed on influencing farmers' decisions, the value placed on keeping informed and formal education are among the personality system variables that are related to economic success of retail firms.

**Retail firms as social systems**

The following proposition, hypotheses and findings pertain to retail firms as social systems and to economic success of the firms.

**Theoretical Proposition 2:** Certain relevant characteristics of retail firms as social systems are related to the economic success of the firms.
General Hypothesis 3: Certain relevant facilities and resources of retail firms are related to the economic success of the firms.

Specific Hypothesis 15: The relative number of employees in farm machinery dealerships is related positively to the economic success of the firms.

E.H. 33: The number of full-time employees is related positively to net income. The null hypothesis is: There is no positive relationship between the number of full time employees and net income. The computed correlation coefficient is .395 which is significant beyond the .0005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 34: The number of full-time employees is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the number of full time employees and net income. The computed correlation coefficient is .797 which is significant beyond the .0005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 15 was tested by two empirical hypotheses. Both of them were supported beyond the .0005 level of probability. These data, therefore, support the specific hypothesis of a relationship between the number of employees in farm machinery dealerships and the economic success of the firms.

Specific Hypothesis 16: The relative financial resources of farm machinery dealerships are related positively to the economic success of the firms.

E.H. 35: Net worth is related positively to net income. The null hypothesis is: There is no positive relationship between net worth and net income. The computed correlation coefficient is .260 which is significant beyond the .05 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.
E.H. 36: Net worth is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between net worth and total dollar volume of sales and service. The computed correlation coefficient is .517 which is significant beyond the .0005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 16 was tested by two empirical hypotheses. Both of them were supported; one beyond the .0005 level of probability. These data support the specific hypothesis of a positive relationship between financial resources of farm machinery dealerships and the economic success of the firms.

Specific Hypothesis 17: The line of products sold by farm machinery dealerships is related positively to the economic success of the firms.

E.H. 37: The popularity score for line of products sold is related positively to net income. The null hypothesis is: There is no positive relationship between the popularity score for line of products sold and net income. The calculated correlation coefficient is .140 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis at the .05 level of probability.

E.H. 38: The popularity score for line of products sold is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the popularity score for line of products sold and total dollar volume of sales and service. The calculated correlation coefficient is .483 which is significant beyond the .0005 level of probability. The null is refuted. These data support the empirical hypothesis.

Specific Hypothesis 17 was tested by two empirical hypotheses. One was supported beyond the .0005 level. The other was in the hypothesized direction but was not statistically significant. These data provide limited support for the specific hypothesis of a positive
relationship between the line of products sold by a farm machinery dealership and the economic success of the firm.

Specific Hypothesis 18: A weighted combination of certain facilities and resources of farm machinery dealerships is related to the economic success of the firms.

E.H. 39: There is a correlation between a weighted combination of the three measures of facilities and resources and net income. This hypothesis stated in its null form is: There is no correlation between a weighted combination of the three measures of facilities and resources and net income. The computed F value is 4.81 with 3 and 75 degrees of freedom. This is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

The computed value of R for E.H. 39 is .4017 and the value of $R^2$ is .1614. The three measures of facilities and resources, thus, "explain" approximately 16 percent of the variance in net income. The contribution of each of the three measures is indicated in Table 11. The value of $R$ for the three measures was only .0065 greater than the correlation coefficient of the zero order relationship between the number of full time employees and net income.

Table 11. Regression weights and correlations of social system variables used in computation of multiple correlation coefficients for net income

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>b*</th>
<th>$r_y$</th>
<th>$(b^*)(r_y)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of full time employees</td>
<td>.3525</td>
<td>.3952</td>
<td>.1393</td>
</tr>
<tr>
<td>Net worth</td>
<td>.0831</td>
<td>.2603</td>
<td>.0216</td>
</tr>
<tr>
<td>Popularity score for line of products sold</td>
<td>.0036</td>
<td>.1399</td>
<td>.0005</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>.1614</td>
</tr>
</tbody>
</table>

$R^2 = .1614 \quad R = .4017 \quad R' = .3576$
E.H. 40: There is a correlation between a weighted combination of the three measures of facilities and resources and total dollar volume of sales and service. This hypothesis stated in null form is: There is no correlation between a weighted combination of the three measures of facilities and resources and total dollar volume of sales and service. The computed F value is 59.41 with 3 and 76 degrees of freedom. This is significant beyond the .001 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

The computed value of R for E.H. 40 is .8389 and the value of $R^2$ is .7038. The three measures of facilities and resources, thus, "explain" approximately 70 percent of the variance in total dollar volume of sales and service. The contribution of each of the three measures is indicated in Table 12. The number of full time employees accounts for a large proportion of the "explained" variation.

Specific Hypothesis 18 was tested by two empirical hypotheses. Both of these were supported beyond the .01 level of probability. The data support the specific hypothesis of a relationship between a weighted combination of certain facilities and resources of farm machinery dealerships and economic success of the firms.

General Hypothesis 3 suggests that certain relevant facilities and resources of retail firms are related to the economic success of the firms. Four specific hypotheses were derived from this general hypothesis. Three of these hypotheses were supported and the other one received limited support. These data for farm machinery dealerships provide support for the general hypothesis which pertains to facilities and resources in retail firms.

General Hypothesis 3 and the four specific hypotheses derived from
Table 12. Regression weights and correlations of social system variables used in computation of multiple correlation coefficients for total dollar volume of sales and service

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>b*</th>
<th>r_y</th>
<th>(b*)(r_y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of full time employees</td>
<td>.6576</td>
<td>.7974</td>
<td>.5244</td>
</tr>
<tr>
<td>Net worth</td>
<td>.1259</td>
<td>.5172</td>
<td>.0651</td>
</tr>
<tr>
<td>Popularity score for line of products sold</td>
<td>.2366</td>
<td>.4832</td>
<td>.1143</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>.7038</td>
</tr>
</tbody>
</table>

$R^2 = .7038$

$R = .8389$

$R' = .8319$

it were derived from Theoretical Proposition 2. Theoretical Proposition 2 states that certain relevant characteristics of retail firms as social systems are related to the economic success of the firms. From the data on farm machinery dealerships it may be inferred that the number of employees, the line (brand) of products sold and the financial resources are among the social system variables which are related to economic success. Each of these was involved in a significant relationship for the farm machinery data.

Activities of managers

The following proposition, hypotheses and findings pertain to activities of managers of retail firms and to economic success of the
Theoretical Proposition 3: Certain relevant activities of managers of retail firms are related to the economic success of the firms they manage.

General Hypothesis 4: Management activities of managers of retail firms are related to the economic success of the firms they manage.

Specific Hypothesis 19: The relative amount of time spent in management and supervision by farm machinery dealers is related positively to the economic success of the firms they manage.

E.H. 41: The percent of time spent in management and supervision is related positively to net income. The null hypothesis is: There is no positive relationship between the percent of time spent in management and supervision and net income. The computed correlation coefficient is .279 which is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

E.H. 42: The percent of time spent in management and supervision is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the percent of time spent in management and supervision and total dollar volume of sales and service. The computed correlation coefficient is .318 which is significant beyond the .005 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

Specific Hypothesis 19 was tested by two empirical hypotheses. Each of these empirical hypotheses was supported. These data support the specific hypothesis of a positive relationship between time spent in management and supervision by farm machinery dealers and the economic success of the firms they manage.

Specific Hypothesis 19 was derived from General Hypothesis 4.
Support for General Hypothesis 4 may, thus, be inferred from the support for Specific Hypothesis 19.

**General Hypothesis 5:** Sales activities of managers of retail firms are related to the economic success of the firms.

**Specific Hypothesis 20:** The relative amount of time spent in sales activities by farm machinery dealers is related positively to the economic success of the firms they manage.

**E.H. 43:** The percent of time spent in sales activities is related positively to net income. The null hypothesis is: There is no positive relationship between the percent of time spent in sales activities and net income. The computed correlation coefficient is .024 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

**E.H. 44:** The percent of time spent in sales activities is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the percent of time spent in sales activities and total dollar volume of sales and service. The computed correlation coefficient is .124 which is not significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 20 was tested by two empirical hypotheses. Neither of them was supported. These data do not support the specific hypothesis of a positive relationship between time spent in sales activities by farm machinery dealers and economic success of the firms they manage.

Since the data do not support Specific Hypothesis 20, they also fail to support General Hypothesis 5 from which Specific Hypothesis 20 was derived.

**General Hypothesis 6:** Information seeking activities of managers
of retail firms are related to the economic success of the firms they manage.

**Specific Hypothesis 21:** The relative number of information sources used by farm machinery dealers is related positively to the economic success of the firms they manage.

**E.H. 45:** The number of information sources used is related positively to net income. The null hypothesis is: There is no positive relationship between the number of information sources used and net income. The calculated correlation coefficient is .128 which is not statistically significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

**E.H. 46:** The number of information sources used is related positively to total dollar volume of sales and service. The null hypothesis is: There is no positive relationship between the number of information sources used and total dollar volume of sales and service. The computed correlation coefficient is .140 which is not statistically significant. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

Specific Hypothesis 21 was tested by two empirical hypotheses. Neither of them was supported at the .05 level of probability. Both of the relationships, however, were in the hypothesized direction. These data provide only very limited support for the specific hypothesis of relationship between the number of information sources used by farm machinery dealers and the economic success of the firms they manage.

Specific Hypothesis 21 was derived from General Hypothesis 6. Very limited support for General Hypothesis 6 may be inferred from the very limited support for Specific Hypothesis 21.

**Specific Hypothesis 22:** A weighted combination of certain
activities of farm machinery dealers is related to the economic success of the firm they manage.

**E.H. 47:** There is a correlation between a weighted combination of the three measures of activities of farm machinery dealers and net income. This hypothesis stated in its null form is: There is no correlation between a weighted combination of the three measures of activities of farm machinery dealers and net income. The computed F value is 2.54 with 3 and 75 degrees of freedom. This is not significant at the .05 level of probability. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

The computed value of R for E.H. 47 is .3035 and the value of $R^2$ is .0921. The three scores account for less than ten percent of the variance in net income.

**E.H. 48:** There is a correlation between a weighted combination of the three measures of activities of farm machinery dealers and total dollar volume of sales and service. This hypothesis stated in its null form is: There is no correlation between a weighted combination of the three measures of activities of farm machinery dealers and total dollar volume of sales and service. The computed F value is 4.58 with 3 and 75 degrees of freedom. This is significant beyond the .01 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

The computed value of R for E.H. 48 is .3917 and the value of $R^2$ is .1534. The three measures of activities of farm machinery dealers, thus, "explain" approximately 15 percent of the variance in total dollar volume of sales and service. The contribution of each of the three measures is indicated in Table 13. The measure of activity which accounts for the largest proportion of "explained" variation is time spent in management and supervision.

Specific Hypothesis 22 was tested by two empirical hypotheses. One of these was supported while the other was not. The data, thus,
Table 13. Regression weights and correlations of activity variables used in computation of multiple correlation coefficients for total dollar volume of sales and service

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>b*</th>
<th>r_y</th>
<th>(b*)(r_y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time spent in management and supervision</td>
<td>.3689</td>
<td>.3183</td>
<td>.1174</td>
</tr>
<tr>
<td>Time spent in sales activities</td>
<td>.2280</td>
<td>.1243</td>
<td>.0283</td>
</tr>
<tr>
<td>Number of information sources used</td>
<td>.0549</td>
<td>.1403</td>
<td>.0077</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>.1534</td>
</tr>
</tbody>
</table>

R² = .1534
R = .3917
R' = .3457

provide limited support for the specific hypothesis of a relationship between a weighted combination of certain activities of farm machinery dealers and economic success of the firms they manage.

The general hypotheses from 4 through 6 and the specific hypothesis from 19 through 22 were derived from Theoretical Proposition 3. Theoretical Proposition 3 states that certain relevant activities of managers of retail firms are related to the economic success of the firms they manage. From the data on farm machinery dealerships it may be inferred that time spent in management and supervision is among the activities of managers of retail firms which are related to economic success.

Specific Hypothesis 23: A weighted combination of certain personality variables, social system variables and activity variables is
related to economic success of farm machinery dealerships.

E.H. 49: There is a correlation between a weighted combination of the measures of personality system, social system, and activity variables and net income. The hypothesis stated in its null form is: There is no correlation between a weighted combination of the measures of personality system, social system and activity variables and net income. The computed $F$ value is 1.43 with 20 and 58 degrees of freedom. This is not significant at the .05 level of probability. The null hypothesis is not refuted. These data do not support the empirical hypothesis.

The computed value of $R$ is .5746 and the value of $R^2$ is .3302. The 20 measures, thus, account for less than one-third of the variance in net income.

E.H. 50: There is a correlation between a weighted combination of the measures of personality system, social system and activity variables and total dollar volume of sales and service. The hypothesis stated in null form is: There is no correlation between a weighted combination of the measures of personality system, social system and activity variables and total dollar volume of sales and service. The computed $F$ value is 9.91 with 20 and 58 degrees of freedom. This is significant beyond the .001 level of probability. The null hypothesis is refuted. These data support the empirical hypothesis.

The computed value of $R$ for E.H. 50 is .8796 and the value of $R^2$ is .7736. The twenty measures of personality system variables, social system variables and activity variables, thus, "explain" approximately 77 percent of the variance in total dollar volume of sales and service. The contribution of each of the twenty measures is indicated in Table 14. The data in Table 14 indicate that when the variables are considered together the measures of social system variables (facilities and resources) account for the largest proportion of the explained variation.

Specific Hypothesis 23 was tested by two empirical hypotheses. One
Table 14. Regression weights and correlations of personality system, social system and activity variables used in computation of multiple correlation coefficients for total dollar volume of sales and service

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>b*</th>
<th>r_y</th>
<th>(b*)(r_y)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personality system variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive elements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value placed on mental activity</td>
<td>.0307</td>
<td>.3633</td>
<td>.0112</td>
</tr>
<tr>
<td>Progressivism</td>
<td>.0406</td>
<td>.2332</td>
<td>.0095</td>
</tr>
<tr>
<td>Value placed on security</td>
<td>.0483</td>
<td>-.1579</td>
<td>-.0076</td>
</tr>
<tr>
<td>Value placed on economic goals</td>
<td>.0095</td>
<td>-.0713</td>
<td>-.0007</td>
</tr>
<tr>
<td>Value placed on non-economic goals</td>
<td>-.0019</td>
<td>-.0623</td>
<td>.0001</td>
</tr>
<tr>
<td>Value placed on approval of peers</td>
<td>-.2159</td>
<td>-.0637</td>
<td>.0137</td>
</tr>
<tr>
<td>Value placed on independent decision-making</td>
<td>-.0201</td>
<td>.0085</td>
<td>-.0002</td>
</tr>
<tr>
<td>Value placed on influencing farmers' decisions</td>
<td>.0063</td>
<td>.2819</td>
<td>.0018</td>
</tr>
<tr>
<td>Value placed on keeping informed:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willingness to attend training sessions</td>
<td>.0527</td>
<td>.2975</td>
<td>.0157</td>
</tr>
<tr>
<td>Perceived importance of information on management practices</td>
<td>.1731</td>
<td>.3484</td>
<td>.0603</td>
</tr>
<tr>
<td>Perceived importance of product information</td>
<td>-.0721</td>
<td>.2303</td>
<td>-.0166</td>
</tr>
<tr>
<td><strong>Background characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.0792</td>
<td>-.0408</td>
<td>-.0032</td>
</tr>
<tr>
<td>Formal education</td>
<td>.0144</td>
<td>.2075</td>
<td>.0030</td>
</tr>
<tr>
<td>Years of management experience</td>
<td>-.1138</td>
<td>.0432</td>
<td>-.0049</td>
</tr>
<tr>
<td><strong>Social system variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities and resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of full-time employees</td>
<td>.6236</td>
<td>.7974</td>
<td>.4972</td>
</tr>
<tr>
<td>Net worth</td>
<td>.1116</td>
<td>.5172</td>
<td>.0577</td>
</tr>
<tr>
<td>Popularity score for line of products sold</td>
<td>.2820</td>
<td>.4832</td>
<td>.1362</td>
</tr>
<tr>
<td>Activity variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent in management and supervision</td>
<td>-.0232</td>
<td>.3183</td>
<td>-.0074</td>
</tr>
<tr>
<td>Time spent in sales activities</td>
<td>.0699</td>
<td>.1243</td>
<td>.0087</td>
</tr>
<tr>
<td>Number of information sources used</td>
<td>-.0064</td>
<td>.1403</td>
<td>-.0009</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R² = .7736</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R = .8796</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R' = .8340</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
of these was supported and the other was not. The data, therefore, provide limited support for the specific hypothesis of a relationship between a weighted combination of certain personality system variables, social system variables and activity variables and economic success of retail firms.

The various findings are discussed and summarized in the following chapter.
DISCUSSION

Introduction

The objectives, conceptual framework and findings of this thesis have now been presented. In this chapter the findings are summarized, the findings, methods, and theory are discussed and suggestions are made for future research pertaining to relationships between social and social-psychological factors and economic success of retail firms.

This thesis has been concerned with delineating some of the factors (especially social and social-psychological variables) which are related to economic success in retail firms. In the conceptual framework it was indicated that outcomes of action in social systems (including economic success of retail firms) are a result of the actions of social actors in social situations. It was further suggested that outcomes of action can be conceptualized as a function of personality system variables, social system variables, cultural system variables and physical objects. It was suggested that managers of retail firms can be conceptualized as social actors and retail firms can be conceptualized as social systems.

Three theoretical propositions were derived from the conceptual framework. The first postulated that the personality system of the manager of a retail firm is related to the success of the firm. The second postulated that certain relevant characteristics of retail firms as social systems are related to the economic success of the firms. The third theoretical proposition suggested that certain relevant activities
of managers of retail firms are related to the economic success of the firms they manage.

Six general hypotheses were derived from the theoretical propositions and a total of 23 specific hypotheses were developed from the general hypotheses.\(^1\) These specific hypotheses were tested with a total of 50 empirical hypotheses. The results of the tests of the hypotheses were reported in the findings section. These findings are summarized below.

**Summary of Findings**

**Personality system**

Theoretical Proposition 1 states that personality systems of managers of retail firms are related to the economic success of the firms they manage.

Some aspects of the personality system which influence action and outcomes of action in social systems were indicated in the discussion of the personality system in the conceptual framework. Two general hypotheses were developed from Theoretical Proposition 1. The first general hypothesis suggested a relationship between certain relevant cognitive elements of managers of retail firms and the economic success of the firms they manage. The second general hypothesis suggested that

\(^1\)In all cases the general hypotheses were stated in terms of retail firms while the specific and empirical hypotheses pertained to farm machinery dealerships (since the data were gathered from farm machinery dealerships). Care must be taken in generalizing to the general hypotheses from the specific and empirical hypotheses.
certain relevant background characteristics of managers of retail firms are related to economic success of the firms.

**Cognitive elements**  
Ten specific hypotheses of linear relationships (direction predicted) between cognitive elements and economic success of farm machinery dealerships were tested. According to the data the following cognitive elements were related to economic success of the farm machinery dealerships: the value placed on mental activity (positive relationship), progressivism (positive relationship), the value placed on influencing farmers' decisions (positive relationship). There was limited support for the hypotheses of relationships between economic success of farm machinery dealerships and the following variables: the value placed on security (negative relationship) and the value placed on keeping informed (positive relationship). There was only very limited support for the hypothesis of a negative relationship between the value placed on approval of peers and economic success. Three hypothesized relationships which were not supported by the data involved the measures of: the value placed on economic goals, the value placed on non-economic goals and the value placed on independence in decision-making.

Caution must be exercised in generalizing from farm machinery dealerships to retail firms. The fact, however, that certain variables (selected on the basis of theory and past research) were found to be related significantly to economic success of farm machinery dealerships does provide inferential support for the hypothesis that they may also be related to economic success of retail firms generally.
Some of the variables were found not to be related. There are two possible explanations when no relationship is found. First, the variables may not actually be related in the population being studied. Second, there may actually be a relationship which was not measured. These two possibilities are discussed further in the comments on the findings, methods and theory.

**Background characteristics** Four specific hypotheses of linear relationships (direction predicted) between background characteristics of managers of farm machinery dealerships and economic success were tested. The data provided only limited support for the relationship between formal education and economic success (positive relationship) and the relationship between years of management experience and economic success (positive relationship). The hypothesized negative relationship between age and economic success was not supported. The multiple correlation, involving both the measures of cognitive elements and background characteristics of farm machinery dealers (Specific Hypothesis 14), indicated that background characteristics account for little variance in economic success that cannot be "explained" by cognitive elements.

These data from farm machinery dealerships provide limited inferential support for the general hypothesis that certain background characteristics (education and management experience) of managers of retail firms are related to economic success of the firms. The data also indicate, however, that education and years of management experience account for little variation that cannot be "explained" with
other variables.

**Social system**

Theoretical Proposition 2 states that certain relevant characteristics of retail firms as social systems are related to the economic success of the firms.

Some aspects of social systems which influence action and outcomes of action were indicated in the discussion of the social system in the conceptual framework. One general hypothesis was developed from Theoretical Proposition 2. This is General Hypothesis 3 which suggests that certain relevant facilities and resources of retail firms are related to the economic success of the firms.

**Facilities and resources**

Four specific hypotheses of linear relationships (direction predicted) between facilities and resources and economic success of farm machinery dealerships were tested. Three of the specific hypotheses were supported by the data and the other received limited support. The number of full time employees correlated .395 with net income and .797 with total dollar volume of sales and service. The other two measures of facilities and resources, net worth and line of products sold, were somewhat less highly related to economic success. The multiple correlation coefficient for the three measures and total dollar volume of sales and service was .8389. The value of \( R^2 \) was .7038.

These data from farm machinery dealerships provide inferential support for the general hypothesis that certain facilities and resources
185 of retail firms (number of employees, net worth and line of products sold) are related to economic success of the firms.

**Activities of managers**

Theoretical Proposition 3 states that certain relevant activities of managers of retail firms are related to the economic success of the firms they manage.

Three general hypotheses were developed from Theoretical Proposition 3. The first general hypothesis (G.H. 4) suggested a relationship between management activities of managers of retail firms and economic success of the firms. The second (G.H. 5) suggested a relationship between sales activities and economic success. The third general hypothesis (G.H. 6) suggested that information seeking activities of managers of retail firms are related to the economic success of the firms.

**Management activities** One specific hypothesis of linear relationship involving management activities was tested. The data supported the specific hypothesis of a positive relationship between time spent in management and supervision by farm machinery dealers and economic success of the firms they manage.

These data from farm machinery dealerships provide inferential support for the general hypothesis that management activities of managers of retail firms are related to economic success of the firms.

**Sales activities** One specific hypothesis of linear relationship involving sales activities was tested. The data did not support
the specific hypothesis of a positive relationship between time spent in sales activities by farm machinery dealers and economic success of the firms they manage.

The data from farm machinery dealerships do not support the general hypothesis that sales activities of managers of retail firms are related to economic success of the firms.

Information seeking activities One specific hypothesis of linear relationship involving information seeking activities was tested. The data provided only very limited support for the specific hypothesis of a positive relationship between the number of information sources used by farm machinery dealers and the economic success of the firms they manage.

The data from farm machinery dealerships provide very limited inferential support for the general hypothesis that information seeking activities of managers of retail firms are related to economic success of the firms.

An additional specific hypothesis pertaining to management activities and economic success was also tested. This was the hypothesis of a multiple relationship between the three activity variables and economic success (Specific Hypothesis 22). This hypothesis received limited support. The three measures of activities "explained" approximately 15 percent of the variance in total dollar volume of sales and service.

The final specific hypothesis (Specific Hypothesis 23) was an hypothesis of multiple relationship between a weighted combination of
the personality system variables, the social system variables and the activity variables and economic success. This hypothesis received limited support from the data. The value of $R^2$ for the test involving net income as a measure of economic success was .3302. The value of $R^2$ for the test involving total dollar volume of sales and service as a measure of economic success was .7736. The one variable which accounted for the greatest amount of "explained" variation was number of full-time employees.

The findings have now been presented and summarized. Certain comments still remain to be made not only on these findings but also on the methodology and the theoretical approach of the thesis.

Evaluation and Suggestions for Future Research

This section contains comments which pertain to the findings, to the methodology and to the theoretical approach of this thesis. Suggestions are also made for future research on social and social-psychological factors and economic success of retail firms.

Comments on the findings, methods and theory

The findings of any research study depend upon more than just the actual relationships among the variables in the population being studied. The findings are also influenced by the methods used and by the theoretical approach. If important variables (either predictors or controls) are excluded from the analysis, this affects the findings. If the concepts are poorly operationalized, this affects the findings. And the
way the study is conceptualized and conducted influences the interpreta-
tion of the findings.

It was mentioned previously that there are two main reasons why
hypotheses of relationship may be rejected. First, the variables which
are hypothesized to be related may actually be unrelated. Second the
relationship may actually exist but not be measured.

There are several reasons why relationships might go undetected.
Some of these reasons include: 1) the sample might not be representa-
tive of the population, 2) the concepts might not be operationalized
well, 3) the types of relationships hypothesized (and the statistical
tests used) might not be appropriate, and 4) certain relevant variables
might not have been controlled. All of these reasons are considered
further below. Other comments on both methods and theory and their re-
lationships to the findings are also presented below.

The sample used for this thesis was a stratified random sample
(stratified by economic areas) of farm machinery dealerships. The
sample included between six and eight percent of the farm machinery
dealerships in Iowa in 1963. The empirical findings are considered to
be generalizable to the population of Iowa farm machinery dealers.
Caution must be exercised, however, in generalizing the findings to
other geographical areas, to firms selling other product lines, and to
years other than 1963.

The sample included 79 farm machinery dealerships. This sample
size was large enough to make possible the use of several different
types of statistical tests. It was too small, however, to justify
extensive use of statistical control techniques such as partial correlation (128). A larger size of sample would have provided greater freedom in the choice of analytical techniques.

The problem of operationalizing the concepts is a crucial problem in any field study. The operationalization of such variables as attitudes, beliefs and values is very difficult.

There were problems involved in measuring the cognitive elements for this thesis. Five of six empirical hypotheses of zero order relationships involving cognitive elements, which were measured by multi-item scales, were supported. None of the eight empirical hypotheses of zero order relationships involving the next four measures of cognitive elements were supported. These four measures were single statement items rather than scales. It is possible that this lack of significant relationships was due to the type of measures used (the single statement measures) rather than to a lack of relationship between the variables.

Net income was also difficult to measure for this thesis. Half of the empirical hypotheses in this thesis involved net income as a measure of economic success. The other half involved total dollar volume of sales and service. Sixteen empirical hypotheses involving total dollar volume of sales and service were supported while only nine empirical hypotheses involving the measure of net income were supported. The question arises: Was net income actually related to the independent variables so much less than total dollar volume of sales and service or was net income just not measured as well?
There is little doubt that net income was not measured as well as total dollar volume of sales and service (e.g., only three categories of net income were coded). It is also possible, however, that net income was actually less highly related to the various independent variables than was total dollar volume of sales and service. There are many ways in which a given level of net income can be achieved. Volume of business, costs, and markup on sales all influence net income. A given level of net income can be achieved in many ways. Dealerships falling in the same category of net income might differ greatly in total dollar volume of sales and service. They would probably also differ in other characteristics. (The correlation between net income and total dollar volume of sales and service was $r = .345$.) Thus, while there were problems in measuring net income, it is also possible that net income is more difficult to predict from other variables than is total dollar volume of sales and service.

The codes used for each of the measures of the independent and dependent variables were indicated in the methodology section. In interpreting the correlation coefficients it is well to remember the way the various measures were coded. For example, it should be remembered that all figures for total dollar volume of sales and service above 500,000 dollars were coded as 500,000.

In any research study it is important for the statistical analyses employed to be appropriate to the problems being analyzed and to the type of data available. Only linear relationships were tested in this thesis. These relationships were hypothesized on the basis of
theoretical considerations and past research. In only one case was there concern about the possibility of a curvilinear relationship between the measures. This was the variable age. A chi-square test was used to test for non-independence between age and total dollar volume of sales and service. The computed chi-square value was not significant.

The theoretical approach has important implications for the findings of any study. It is necessary in any analysis to decide which variables to include and how to treat them. In this thesis it was decided to develop a relatively general conceptual framework, emphasizing both personality system variables and social system variables. This follows from the suggestion by Smelser and Smelser that:

Any concrete social situation always involves the operation of variables at both social and psychological levels and complicated feedback relations between the levels (106, p. 4).

It was decided to involve many variables in the analysis, rather than to attempt to develop a tight causal argument involving only a very limited number of variables. This is not to suggest, however, that causal inferences and control techniques are not important to the development of the social sciences. Much has been written in recent years about causal inferences and control (10; 19; 22; 43; 58; 102; 105; 113). A major concern of persons who advocate causal analysis is to control relevant variables in such a way as to determine precisely how a given independent variable is related to a dependent variable. What is desired is to know not only if variable $x$ is related to variable $y$ but how they are related. What happens to the relationship between $x$ and $y$,
for example, if some other variable, t, is controlled?

Four possible ways of elaborating relationships involving three variables have been discussed by Lazarsfeld (58). The four types of elaboration are indicated below.

Assume that there are three variables. The first, x, is an independent variable, the second, y, is a dependent variable and the third, t, is a test variable -- either an intervening variable or an antecedent variable (including simultaneity of x and t as antecedent). The test variable, t, can influence the relationship between x and y in four ways.

1. The relationship between x and y may be spureous (both x and y follow from t). In this case t is an antecedent variable such that if t is controlled the relationship between x and y disappears. Lazarsfeld referred to this as "explanation" (43; 58).

2. The relationship between x and y may be "interpreted" by t. In this case t is an intervening variable such that if t is controlled the relationship between x and y disappears. Lazarsfeld referred to this as "interpretation" (43; 58).

3. The relationship between x and y may depend upon t as a condition. In this case t is an antecedent variable such that if t is controlled the relationship between x and y becomes more pronounced. Lazarsfeld referred to this as "specification" (58).

4. The relationship between x and y may depend upon t as a contingency. In this case t is an intervening variable such that if t is controlled the relationship between x and y becomes more pronounced.
This was also referred to by Lazarsfeld as "specification" (58).

These four types of elaboration have implications for the findings of this thesis. In interpreting the findings it is important to remember that some of the relationships which were found might not have been as pronounced or might even have disappeared if other relevant variables had been controlled. It is also important to remember that control of certain variables might have made some of the relationships more pronounced.

It has already been indicated that the size of the farm machinery dealership sample was too small to allow the use of statistical control techniques in this thesis (69; 128). In addition, the time sequence of the data collection was not conducive to causal analysis (the data were all collected at one time). A goal for the future, however, is to isolate the variables which are most relevant to economic success in retail firms and, eventually, to be able to make statements which have causal implications.

A goal in developing the conceptual framework was to include the concepts which are most useful in analyzing various aspects of action and outcomes of action in retail firms. It was desired that the framework would be general enough to be applicable to a wide range of problems. It was not possible in the thesis, however, to test hypotheses containing all of the most important concepts. Intelligence, for example, is a trait which may be very important to economic success. Intelligence was discussed in the conceptual framework but was not measured in the study of farm machinery dealers.
Other important concepts pertaining to group phenomena, which were not explicitly included in the conceptual framework, include group cohesion and leadership. These aspects of social systems probably have important implications for action and outcomes of action.

Additional variables which are also important but which were not measured either as predictor or control variables in this thesis include trade territory and competition variables. Perhaps these variables can be included in future research studies of retail firms.

On the basis of the preceding considerations some suggestions for future research are presented below.

**Suggestions for future research**

The building of a scientific body of knowledge is a cumulative process. It involves adding to conceptual frameworks and theoretical schemes as new data are examined and new findings are reported. It involves constant revision and reformulation of conceptual frameworks and theoretical approaches. Future research and theory building should lead to improved approaches to action and outcomes of action in retail firms.

One important outcome of future research on retail firms should be further specification of the variables which are most relevant to various types of action and outcomes of action. Future research should attempt to ascertain precisely which variables are most important in explaining various types of action. It should also be concerned with interrelationships among these variables. Specific variables which might well be emphasized in the future include: intelligence and
knowledge; attitudes, beliefs and values; group cohesion; social control; systems of rewards; the process of decision-making; communication networks and the process of communication. Relationships might also be explored between self conceptions of managers of retail firms and their actions and the outcomes of their actions.

Future research pertaining to retail firms, then, should be concerned with delineating the most relevant variables and with developing propositions involving these variables. Care should be taken in the selection not only of the most relevant independent and dependent variables but important control variables should also be considered.

The variables selected and the way they are measured will depend on the particular problem being analyzed. The variables should be measured carefully. Variables such as cognitive elements are difficult to measure and their measurement should be improved. Value scales such as those developed by Warland (122) might be useful in future studies. Care must be exercised, however, in adapting such scales to new populations.

In future studies concerned with economic success measurement of the dependent variable must be emphasized. Variables such as net income must be measured very carefully.

Sampling for future studies should be done both in terms of the type of analysis which is planned and also in terms of the population to which the findings are to be generalized. Wolins (128) has suggested a size of 200 or more cases if the researcher is contemplating the use of statistical control techniques with psychological variables.
Retail firms sell a wide variety of products. If generalizations are to be made about retail firms (rather than just farm machinery dealerships) it will be necessary to conduct research on firms selling other product lines. Future research should indicate not only the similarities among various retail firms but also something of the differences between various types of retail firms.
SUMMARY

This thesis has been concerned with relationships between socio­
logical and social-psychological variables and economic success of re­
tail firms. More generally it has been concerned with action and out­
comes of action in retail firms as social systems. Two main objectives
have guided the analysis of the thesis.

Objective 1: To delineate some of the variables which influence
economic success in retail firms and to test for relationships.

Objective 2: To develop a conceptual framework which will be
relevant not only to economic success but also to a wide range of
problems of retail firms.

In the conceptual framework of this thesis economic success of
retail firms was conceptualized as an outcome of action. Managers of
retail firms were conceptualized as social actors and retail firms were
conceptualized as social systems. It was assumed that social actors
act in terms of definitions of situations. Both the action and the
situation influence the outcomes of action. Situation has two main
components: social objects and nonsocial objects. Social objects
include personality systems and social systems. Nonsocial objects in­
clude culture and physical objects. From these considerations the
following equation was derived:

\[ \text{Outcome of Action} = f(\text{Personality of the Actor (the manager)}, \text{ Economic Success}) \]

\[ f(\text{Other personality systems, Social Systems, Culture, Physical Objects}). \]

Equation 3.

In Equation 3 it was assumed that action intervenes between the
various systems and the outcome of action.

Separate sections of the conceptual framework were devoted to the personality system, the social system, culture and physical objects. The personality system and the social system were emphasized. Elements and process of personality systems and of social systems were delineated and discussed. The elements of the personality system included: needs; wants, wishes, desires; goals; values; beliefs; knowledge; sentiments; attitudes; interpersonal response traits; intelligence and symbolic skills. The individual processes included: perceiving, learning, thinking, cognitive-mapping and decision-making. The elements of the social system included: beliefs, values, goals, norms, position, role, rank, sanctions and facilities. The social processes included: communication and interaction, socialization, social control, institutionalization and allocation. The pattern variables and the functions of management were also discussed.

Three theoretical propositions were derived from the conceptual framework.

**Theoretical Proposition 1:** Personality systems of managers of retail firms are related to the economic success of the firms they manage.

**Theoretical Proposition 2:** Certain relevant characteristics of retail firms as social systems are related to the economic success of the firms.

**Theoretical Proposition 3:** Certain relevant activities of managers of retail firms are related to the economic success of the firms they manage.
General hypotheses, specific hypotheses, and empirical hypotheses were derived for each of the theoretical propositions. The general hypotheses were stated in terms of retail firms. The specific hypotheses and the empirical hypotheses were stated in terms of farm machinery dealerships.

Data from a stratified random sample of farm machinery dealers in Iowa were used to test the hypotheses. Coefficients of zero order and multiple correlation were calculated and tested for significance.

The findings were summarized in the previous chapter. Some highlights of these findings are listed below.

There were 23 specific hypotheses of relationships between personality system variables, social system variables, activity of manager variables and economic success of farm machinery dealerships. Seven of these specific hypotheses were supported, nine received limited support, two received very limited support and five were not supported by the data. Eighteen of these were hypotheses of zero order relationship and the other five were hypotheses of multiple variate relationship. Each of the five specific hypotheses of multiple relationship received at least limited support.

There were six general hypotheses. The results of the tests of the specific hypotheses provided inferential support for three of the general hypotheses, limited inferential support for one of the general hypotheses, very limited inferential support for one of the general hypotheses and one of the general hypotheses was not supported. These general hypotheses are listed below.
General Hypothesis 1: Certain relevant cognitive elements of managers of retail firms are related to the economic success of the firms they manage.

The farm machinery data provided inferential support for this hypothesis. The cognitive elements which were most highly related to economic success included: the value placed on mental activity, progressivism, and the value placed on influencing farmers' decisions. There was also limited support for the relationship involving the value placed on security (negative relationship) and the relationship involving the value placed on keeping informed.

General Hypothesis 2: Certain relevant background characteristics of managers of retail firms are related to the economic success of the firms they manage.

The farm machinery data provided limited inferential support for this hypothesis. The specific hypothesis of a relationship between formal education and economic success received limited support, as did the specific hypothesis involving years of management experience.

General Hypothesis 3: Certain relevant facilities and resources of retail firms are related to the economic success of the firms.

The farm machinery data provided inferential support for this hypothesis. Both number of full-time employees and net worth were significantly related to economic success. There was limited support for the hypothesized relationship between the line of products sold and economic success.

General Hypothesis 4: Management activities of managers of retail
firms are related to the economic success of the firms they manage.

The farm machinery data provided inferential support for this hypothesis. The specific hypothesis of a relationship between time spent in management and supervision by farm machinery dealers and economic success was supported.

**General Hypothesis 5:** Sales activities of managers of retail firms are related to the economic success of the firms.

The farm machinery data did not support this hypothesis.

**General Hypothesis 6:** Information seeking activities of managers of retail firms are related to the economic success of the firms they manage.

The farm machinery data provided only very limited support for this hypothesis. The specific hypothesis of a relationship between the number of information sources used by farm machinery dealers and the economic success of the firms they manage received very limited support.

Limitations of this thesis and suggestions for future research were discussed. In future research attention should be given to delineating the variables which are most relevant to action and outcomes of action in retail firms and to discovering interrelationships among the variables. Care should be exercised in measuring the variables. Samples should be drawn which will be large enough to allow the use of statistical control techniques. And various types of retail firms should be studied so that both similarities and differences among retail firms can be analyzed and general propositions can be developed.
It is hoped that both the conceptual framework and the research findings of this thesis will provide a point of departure or, at least, some relevant insights for future research on action and outcomes of action in retail firms.
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Appreciation is extended to Dr. William Kenkel, Dr. Leroy Wolins and Dr. Clarence Bockhop for their suggestions on the dissertation and on the author's graduate program of study.

Interaction with members of the Rural Sociology Research Group has been an especially valuable aspect of the author's graduate experience. The encouragement offered by the author's wife, parents and siblings is also gratefully acknowledged.
APPENDIX

Tables of Correlation Coefficients
Table 15. Correlations between measures of the independent variables and the dependent variables in the thesis

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variables</th>
<th>Total dollar volume of sales and income (Y)&lt;sub&gt;1&lt;/sub&gt;</th>
<th>(Y)&lt;sub&gt;2&lt;/sub&gt;</th>
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<tbody>
<tr>
<td><strong>Personality system variables</strong></td>
<td></td>
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<tr>
<td><strong>Cognitive elements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X&lt;sub&gt;1&lt;/sub&gt; Value placed on mental activity</td>
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<td>.363</td>
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<td>X&lt;sub&gt;2&lt;/sub&gt; Progressivism</td>
<td>.270</td>
<td>.233</td>
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</tr>
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<td>X&lt;sub&gt;3&lt;/sub&gt; Value placed on security (risk aversion)</td>
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<td>-.158</td>
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<td>-.071</td>
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<td>-.062</td>
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<tr>
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<td>.282</td>
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<tr>
<td>Value placed on keeping informed</td>
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<td>X&lt;sub&gt;11&lt;/sub&gt; Perceived importance of product information</td>
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<td>.230</td>
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<td><strong>Background characteristics</strong></td>
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<td>-.041</td>
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<td>X&lt;sub&gt;14&lt;/sub&gt; Years of management experience</td>
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A correlation coefficient of .187 is significant at the .05 level of probability on a one tail test. A coefficient of .262 is significant at the .01 level on a one tail test.
Table 15. (Continued)

<table>
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<tr>
<th>Dependent variables</th>
<th>Total dollar volume of sales and income</th>
<th>Net income (Y₁)</th>
<th>(Y₂)</th>
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<tr>
<td><strong>Facilities and resources</strong></td>
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<td>$X_{15}$ Number of full-time employees</td>
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<td>$X_{16}$ Net worth</td>
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<td>$X_{17}$ Popularity score for line of products sold</td>
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<td>.483</td>
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<td><strong>Activity variables</strong></td>
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<td>$X_{18}$ Time spent in management and supervision</td>
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<td>.318</td>
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<td>$X_{19}$ Time spent in sales activities</td>
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<td>$X_{20}$ Number of information sources used</td>
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Table 16. Matrix of intercorrelations between measures of the independent and dependent variables

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<td>X_1   Value placed on mental activity</td>
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*A correlation coefficient of .187 is significant at the .05 level on a one tail test.*
and dependent variables^a

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^a one tail test. A coefficient of .262 is significant at the .01 level on a one