

objectives. Behavioral scientists claim behavior is directed toward many objectives, and furthermore that motivation to achieve an objective may be more important in predicting behavior than the objective itself.

The general objectives of this study of farm supply cooperatives were: (1) Identify the corporate and individual power centers' levels of motivation to achieve objectives and evaluate the relationships of these motivation levels to economic performance; (2) Evaluate the relationships between the degrees of conformity of the levels of motivation to achieve objectives within and among cooperatives' power centers and cooperatives' economic performance; and (3) Evaluate the relationship between the degree of seller concentration in a market area and economic performance. Stepwise linear regression analysis was used to test all relationships evaluated.

This study concluded there are substantial differences in levels of motivation to achieve objectives among power centers and also substantial differences in conformities of levels of motivation to achieve objectives among power centers. The levels of motivation to achieve objectives of top management and the board of directors are both substantially related to the economic performance of farm supply cooperatives. In contrast, key employees' levels of motivation to achieve objectives are somewhat less related to the economic performance of farm supply cooperatives.

The levels of motivation to achieve objectives are about equally related to size, rate of growth, efficiency, and debt position of farm supply cooperatives. The levels of motivation to achieve objectives are somewhat less related to profitability of the cooperatives.

The conformities of the levels of motivation showed the highest relationships with efficiency of the farm supply cooperatives and somewhat lower relationships with size, rate of growth, debt position, and profitability of the cooperatives.

The results show the degree of seller concentration in the cooperatives' market area is less useful than the levels of motivation to achieve objectives in predicting the economic performance of farm supply cooperatives.

The Relationship Between Farm Supply Cooperatives'
Economic Performance and Their Organizational
Power Centers' Levels of Motivation to
Achieve Objectives

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THE RELATIONSHIP BETWEEN FARM SUPPLY COOPERATIVES' ECONOMIC PERFORMANCE AND THEIR ORGANIZATIONAL POWER CENTERS' LEVELS OF MOTIVATION TO ACHIEVE OBJECTIVES

I. INTRODUCTION

Successful management of a modern cooperative requires knowledge of the interactions within that cooperative and the interactions between that cooperative and the rest of society. Part of this required knowledge is an awareness of the many different factors which affect the cooperative's economic performance. External factors include such things as governmental policy, the presence or absence of labor unions, and the effects of the market. Internal factors include the personal ability of the manager, the cooperative's internal information network, its corporate objectives, and its level of motivation to achieve those objectives.

The manager of any cooperative is generally responsible for a high level of economic performance in his business. As such, he is likely interested in the relationship between both internal and external factors and the economic performance of the cooperative. Information relative to the nature and extent of such relationships is very likely to aid him as a decision-maker in increasing economic performance of the cooperative.

This study will examine one set of factors hypothesized to affect cooperatives' economic performance rather substantially, the

cooperatives' corporate objectives and the level of motivation of persons in the organization to achieve these objectives. Traditionally, there have been many assumptions made concerning business firms' objectives and motivation with little empirical research to substantiate these assumptions. In this study, economic theory and the writings and research of business theorists and behavioral scientists will be reviewed and integrated to gain a greater insight into the relationship between cooperatives' levels of motivation to achieve various corporate objectives and cooperatives' levels of economic performance.

Rather than assuming that a cooperative either has or does not have a specific corporate objective, it seems reasonable that all cooperatives might have any given objective but vary in their respective levels of motivation to achieve it. From this definition, it is possible for any cooperative to have a given corporate objective but have a zero level of motivation to achieve it. A clear distinction must be made in this case between the level of cooperatives' objectives and their level of motivation to achieve these objectives. For example, assume firm A and firm B both have a profit objective. The level of firm A's profit objective may be \$100,000 and the level of firm B's profit objective may be \$50,000. In addition, both firms A and B might have equal or widely variant levels of motivation to achieve their respective profit objectives. It seems quite conceivable

that any cooperative's economic performance might well vary with differences in the level of motivation to achieve the desired objective, regardless of the level of the desired objective.

An additional question concerns the origin within a firm of both the objectives and the levels of motivation to achieve these objectives. With the much publicized separation of ownership and management in modern business, including cooperatives, the individual or group of individuals within the firm's overall structure who are responsible for the planning function become hard to identify. Isolating those individuals, or groups of individuals, whose objectives and levels of motivation are most consistent with the firms' economic performance could conceivably aid in predicting the economic performance of firms.

Objectives of Study

The overall purpose of this study is to investigate the relationship between local farm supply cooperatives' levels of motivation to achieve specified objectives and the cooperatives' economic performance. The level of motivation to achieve objectives will be examined for each of three power centers (top management, key employees, and board of directors) within the cooperatives, as well as the overall corporate level of motivation for these three power centers collectively. The more specific objectives of the study are:

(1) Identify the individual power centers' levels of motivation to achieve each specified objective and the corporate levels of motivation to achieve each specified objective; (2) Evaluate the conformity of motivation levels within and among power centers; (3) Evaluate the relationship between the levels of motivation to achieve each objective of each power center and cooperatives' economic performance; (4) Evaluate the relationship between the corporate levels of motivation to achieve each objective and economic performance; (5) Evaluate the relationship between the degree of conformity of motivation levels both within and among cooperatives' power centers and cooperatives' economic performance; and (6) Evaluate the effect of market structure on cooperatives' economic performance. This information will be used to investigate the following hypotheses, and to generate additional hypotheses for further analysis.

- 1) Each of the three power centers (top management, key employees, and board of directors) has a different level of motivation to achieve various corporate objectives.
- 2) There is a relationship between power centers' levels of motivation to achieve corporate objectives and the cooperatives' economic performance. This relationship is closest with top management, next closest with the board of directors, and least close with key employees. Specific relationships between levels of motivation to achieve objectives and economic

performance are:

- a) There is a negative relationship between growth motivation and size of cooperatives.
 - b) There is a positive relationship between growth motivation and rate of growth of cooperatives.
 - c) There is a positive relationship between profitability motivation and total net margin of cooperatives.
 - d) There is a positive relationship between both growth and competitive power motivation and debt position of cooperatives.
 - e) There is a positive relationship between efficiency motivation and efficiency of cooperatives.
- 3) The economic performance of cooperatives will increase as the conformity of the levels of motivation increases within and among power centers.
- 4) The economic performance of the cooperative will increase with increases in the degree of seller concentration in the market area of the cooperatives.

II. LITERATURE REVIEW

Background of Business Enterprise

Central in the construction of the economic theory of the firm is the concept of the entrepreneur. The function of the entrepreneur has been described by various writers as including all or some of the following: risk-bearing, innovation, and coordination of the factors of production. In addition, and of prime concern here, the entrepreneurial function includes business leadership. Business leadership has been described by Gordon as, "the function of organizing and directing business enterprises, of making the decisions which direct the course of a firm's activities" (17, p. 5). And one important part of directing the course of the firm is establishing objectives.

In perfect competition the individuals responsible for the entrepreneurial activities are easy to identify. The theory assumes ownership and management embodied in one individual whose only motive is to make profits.

Economists, in developing the theory of perfect competition, saw the entrepreneur as powerless to change the external conditions which affected him and regarded him as an adapter. In contrast, oligopolistic competition provides the entrepreneur a relatively greater degree of independence in performing his leadership functions because he now has some degree of control over these external

forces.

Eventually, the evolution of business enterprise brought about constraints on size and growth as a result of limits on financing. The solution was the modern corporation with its use of limited liability. Ownership was scattered among many individuals with no one individual having control in most cases. The task of management was performed by hired personnel. With the advent of this much discussed separation of ownership and management, the ability to discern just who was performing the entrepreneurial function became much more difficult. Specifically, the question of concern for this study is, "who performs that part of the entrepreneurial function which involves the establishment of objectives--the determination of what the firm is to accomplish?"

In his discussion on operative goals, Perrow believes,

. . . every organization must accomplish four tasks: (1) secure inputs in the form of capital sufficient to establish itself, operate, and expand as the need arises; (2) secure acceptance in the form of basic legitimization of activity; (3) marshal the necessary skills; (4) coordinate the activities of its members, and the relations of the organization with other organizations and with clients or consumers (30, p. 856).

These four basic tasks vary in order of importance among business firms as a result of the variation in business types. Different groups (power centers) within the organization are best equipped to handle each of the different tasks. The task that is preeminent will

determine which power center will dominate. The operative goals will be determined by the dominant groups.

An organization engaged in manufacturing in an industry where skills are routinized with the market position secure, may emphasize coordination, giving control to the experienced administrator. An extractive industry, with a low skill level in its basic task and a simple product, will probably emphasize the importance of capital tied up in land, specialized and expensive machinery, and transportation facilities. The chairman of the board of directors or a group within the board will probably dominate such an organization. An organization engaged in research and development, or the production of goods and services which cannot be carried out in a routinized fashion, will probably be most concerned with skills. Thus engineers or other relevant professionals will dominate. It is also possible that all three groups--trustees, representatives of critical skills, and administrators--may share power equally (30, p. 857).

Board of Directors

The board of directors is one of the power centers in the corporation. The board members legally stand in place of the real owners. They are limited only by stockholders in the charter or bylaws and by federal and state laws in their authority to exercise the corporate powers. In other words, the laws which authorize the establishment of the corporation place the primary responsibility for its welfare on the board.

With the separation of ownership and management, do the representatives of the owners have any useful function in the modern

corporation or are they merely "for show"? Koontz believes they serve a useful social and economic function when he states,

There is always the danger of abuse of power by insiders who may forget their fiduciary relationship to those who have contributed the original capital of the corporation. In addition, executives, necessarily embroiled in the immediate problems of operation, can benefit, as can the corporation, by an impartial superior authority approving their proposals and actions, goading them into looking at problems from a broader point of view, and taking responsibility for major decisions affecting the success and growth and continuity of the company (20, p. 24).

When discussing the functions of the board, he emphasizes the importance of their establishing objectives. "If the board of directors is responsible for anything in the management of a company, it must be the determination of company objectives" (20, p. 58).

Garioian and Haseley support this point of view when in their list of the responsibilities of directors the first one mentioned is, "Establishing basic objectives and broad policies" (15, p. 4). They point out the only reason all stockholders don't participate in this decision is because of its impracticality.

Top Management

Another power center of the modern corporation is top management. This refers to the top few decision-makers of the hired management of the firm. Some writers feel the functions of the

traditional entrepreneur have been passed on to this power center.

As a result, entrepreneurship in the modern corporation has been taken over by transcendent management whose functions differ in kind from those of the traditional subordinate or 'mere manager'. These people, it is argued, can wield considerable power without necessarily holding equity, sharing profits or carrying risks (25, p. 1).

The rise of management has been the subject of volumes of business writing. The power to determine the firm's objectives are generally conceded to be the responsibility of the owners or the representatives of the owner. However, in reality, many of the functions which the board of directors should be performing are taken over by professional managers. "It is claimed. . . that because of widespread distribution of stock ownership, managers are able to do as they wish in running the corporation without regard to the desires of the owners" (36, p. 118-119).

Because of top management's possible ability to determine the direction of the firm as a result of their closeness to its operations, it is important that the owner's wishes be understood by them. However, often this is not the case with top management behaving contrary to the owner's wishes.

The objectives of top management can and frequently do come in conflict with objectives of other stockholders in the firm and in particular with those of the equity owners. Thus, the desire of a president to remain in control of a firm until his retirement would lead him late in his career to become a cautious and conservative decision maker. At that very time the firm's long-term survival may well depend on radical strategic

changes such as abandoning the traditional line of business and diversifying. Faced with the conflict between his own security and the firm's welfare, the president presumably would avoid leading the firm into such change and would, instead, assure other managers, stockholders, and the board that there is no need to rock the boat, that the problem is really not that serious (1, p. 34).

Technostructure

In The New Industrial State, Galbraith takes issue with the common concept which replaces the entrepreneur with management. Instead he classes the "guiding intelligence" of the organization as extending

... from the most senior officials of the corporation to where it meets, at the outer perimeter, the white and blue collar workers whose function is to conform more or less mechanically to instructions or routine. It embraces all who bring specialized knowledge, talent or experience to group decision-making (14, p. 71).

This group he calls the technostructure.

He traces power in economic life from association with land, then capital, and finally with knowledge and skills (technostructure). The technostructure developed as a power center because of the highly technical needs of modern business and also because of the planning required (14, p. 140).

The technostructure might be considered as a source of objectives according to Galbraith.

More specifically, the [objectives] of the mature corporation will be a reflection of the [objectives] of the members of the technostructure. If, as we have seen to be the case, the members of the technostructure set high store by autonomy, and the assured minimum level of earnings by which this is secured, this will be a prime objective of the corporation (14, p. 161).

Economic Theory and Prediction of Economic Performance

The traditional economic theory of the firm is based on perfect competition. A perfectly competitive firm is a small, independent organization run by a combination owner, manager and risk-taker called an entrepreneur. The assumptions of perfect competition include a homogeneous product, many buyers and sellers, easy entry and exit, and perfect knowledge. At equilibrium with this theory, price is equal to the costs of production and production inputs are transferred to where they receive the highest possible price. Although the theory is seldom explicit on this issue, it seems likely that for a true equilibrium to ever exist, one would have to assume all factors were identical in all firms at that point of equilibrium, including personal abilities, capacities, and all aspects of the entrepreneur himself as a person. Otherwise, the firms' resources would never really be equal and consequently neither would their costs. Theory seems prone to accept that quality of labor may vary but that "management is management," in other words, that quality of entrepreneurship is somehow constant.

One of the many uses of the economic theory of the firm is to predict the economic performance of an individual firm. Economic performance factors are the results which a firm generates as a consequence of pursuing whatever lines of behavior it advocates-- results in the dimension of price, output, production and selling costs, innovation, and so forth.

For the prediction of economic performance, the perfectly competitive economic theory of the firm is a useful model because the theoretical firm and its real world counterpart have many factors in common.

The number of firms in the real world is so large that it suffices if some of them react as posited by the theory and the profits of firms are only about 'normal,' that is, excess profits are about zero, because of competitive pressures from newcomers, so that profits below the maximum obtainable would in fact be economic losses in an economic sense (24, p. 15).

The overall level of performance predicted by the perfectly competitive model is generally assumed to be the highest possible. This results in the most efficient production and distribution of goods and services, rapid adoption of innovation, and minimum prices.

However, part of the real world strays drastically from the assumptions of perfect competition. These assumptions were likely reasonable up to the 1870's but have become increasingly unrealistic since (28, p. 168-169). For example, the number of firms in an

industry is often too few to qualify for perfect competition. In the United States in 1962, .11 percent of the total number of corporations controlled 56.5 percent of the total assets of all corporations (3, p. 84). These developments indicate a need for economic theories which would supplement the model of perfect competition.

One such theory of imperfect competition, oligopoly, specifies a market situation where there are a few large firms. With an oligopolistic market structure, because of the larger size and fewer numbers involved, each firm is no longer independent of the others in its actions. This interdependence makes formulation of an economic theory for prediction difficult. As stated by Baumol, "So long as the oligopolists' thought process is taken to be a compound of the form--'I know that he knows that I know,' we may well expect almost anything to result from the confusion" (4, p. 15-16).

There are many different oligopolistic models. Each has its own set of behavior assumptions and each gives different results. For instance, in the Cournot Model each firm in setting its own output assumes the other firms' output will not change. With the Stackelberg Model, each firm decides whether it wants to be a leader or follower. In a two-firm industry with this model, if both decide to be followers, the results will be identical with the Cournot Model. One leader and one follower gives a stable equilibrium. And two leaders will result in an unstable situation where no specific

outcome can be predicted. A Price-leadership Model assumes that all firms will operate at the price set by the leader and no price-cutting will take place.

These examples illustrate that the numbers of possible solutions are approximately as many as there are models or assumed reaction patterns. In fact, some of the models produce an infinite number of solutions. Which of these solutions is the most realistic is an empirical question which is yet to be answered.

The effect of imperfect competition on economic performance is somewhat vague because of the interdependence of the firms and the difficulty of specifying the "correct" model. However, it is generally regarded as resulting in less efficiency than in the perfectly competitive model. In comparison with a perfectly competitive firm in the same market situation, prices will be higher and the quantity produced will be lower, assuming the product could indeed be produced by a perfectly competitive industry.

Bain hypothesized relationships between the behavior patterns (market conduct) of business firms and their market performance. However, empirical research found little evidence to substantiate these claims.

Because of the potential wide variation in pricing aims pursued under complete collusion, incomplete collusion in its several varieties, and interdependence of sellers without collusion, a very wide range of alternative performance possibilities may be attributed to each pattern--

a range roughly from the full monopolistic pole to near the competitive pole. These ranges of possible performance evidently overlap so thoroughly that it is difficult to distinguish meaningfully the predictable performance consequences of the three patterns of intersellers coordination, except in a broad average sense (3, p. 326).

Therefore, to predict market performance Bain relies on market structure characteristics such as degree of market concentration, ease of entry and exit, and product differentiation. The predicted industry performance results obtained are useful but relate only to that part of the economic performance of an individual firm in the industry which is the result of the industry's market structure. Additional determinants are apparently required to explain more of the differences in economic performance among firms within an industry. As a market becomes more concentrated, the firm becomes more important and the market less important in influencing individual firm economic performance.

In perfect competition, economists have used a theoretically constructed firm for predicting economic performance with success. However, with imperfectly competitive markets the predictive results have been vague and questionable. For these markets a real counterpart to the theoretical firm in the perfectly competitive market is required, for as Machlup explains,

. . . because the explanation of changes in prices, inputs, and outputs is at the same time an explanation of decisions of some particular firms, in the sense of organizations

of men acting in particular, sometimes unpredictable, ways (24, p. 15-16).

Kohls suggests examining the firm internally to determine factors which could be used for prediction purposes (19). Clodius and Mueller support this idea in their comments on the use of organization theory in market structure research when they say, "This growing body of theory should receive the careful attention of students of industrial organization. It should supplement the use of market structure analysis" (7, p. 522).

Behavioral Science and Motivation

Work motivation has been examined by many of the behavioral sciences, including psychology, which is concerned with explaining individual human behavior and deals to a considerable extent with the concept of human motivation. Motivation theory is the psychological explanation of "why" in human behavior. According to many psychologists, all behavior is not motivated. Some behavior is determined by physiological conditions and would be excluded from motivation theory per se. Motivation, however, is generally believed to be the most important determinant of behavior.

While some behaviors--specifically those which are not under voluntary control--are assumed to be unmotivated, these probably constitute a rather small proportion of the total behavior of adult human beings. It is reasonable to assume that most of the behavior which people display on their jobs is voluntary, and consequently motivated (35, p. 8).

Motivation theory assumes energetic behavior directed toward objective(s). It is assumed that behavior is for some end purpose, to generate some "payoff" for the behaving organism.

There is an obvious contrast in behavior theory between objectives and levels of motivation. An objective is the end and level of motivation refers to the strength of purpose to accomplish that end. Examples of levels of objectives are profit maximization and a ten percent increase in growth. The level of motivation refers to how strongly the profit maximization objective is pursued.

When the interactions among individuals are governed by a common objective or objectives as above, the study of the organization is known as the "formal theory of the organization." This contrasts with the "informal theory of the organization" where the interactions among the individuals are not dictated by common objectives and, therefore, there is a lack of conscious coordination. Informal organization theory explains why individuals within the organization do not act as planned (22).

Although motivation theory is objective-directed, the objectives are not always achieved.

This should not be interpreted as meaning that [objectives] are always attained. The actions which people take may have effects which are quite different from those which were intended or expected. Individuals do not consider all possible alternatives before they act, and they seldom have perfect knowledge concerning the consequences of different courses of action (35, p. 9).

Economics with its "rational man" assumes money as the only motive force for the firm. In application however, the use of money as an incentive many times produces results just the opposite from expectations. Money as a motivation is unpredictable because it serves two roles. One is the traditional role of fulfilling material values. In addition money fulfills an emotional value.

Money can and usually does portray whatever the individual considers most important in this life. Superimposed on its rational function is the powerful irrational function of mirroring the hopes and fears of the people who use it. Money means whatever people want it to mean and therefore reflects the ambiguously logical and emotional nature of man. The reason people seldom behave rationally about money is that money itself is partly irrational, and this in turn is because mankind has a predilection for projecting its deepest wishes onto some physical aspect of the world around it (16, p. 161).

Thus, to the extent that money motivates people, it does so for different reasons, many of them hidden. Members of the behavioral sciences have recognized the partial failure of economic incentives to explain motivation in work.

In the nineteenth century the theory of the economic man was basic to all notions of motivation for work With changes in the structure of society and with the growing sophistication derived from the new sciences of man, this nineteenth century view became untenable (18, p. 126).

Some of the most important determinants of individual human behavior are wants and needs which are basic to an individual's makeup. In a given time period these remain relatively constant

through different situations the individual faces. They represent a lack of something for the individual which striving toward, and fulfillment of, some objectives will satisfy.

Behavioral scientists have searched widely for clues to these basic wants and needs. Perhaps the most significant work in this area was done by Maslow (26). He contended humans have a need hierarchy consisting of physiological needs, safety needs, acceptance needs, esteem needs, and the need for self-realization. The physiological needs of food, shelter, and so forth are the most basic and are therefore, lowest on his need hierarchy scale. They must be satisfied to an acceptable degree before an individual will concern himself with the next highest needs, safety needs. In other words, the appearance of a need usually rests on the prior satisfaction of another pre-potent need. Once a need is basically satisfied it is no longer a primary motivator of human activity and the "next higher" need becomes the critical one.

Maslow's first two needs, physiological and safety, are primarily satisfied by money while the higher needs are increasingly less so. Therefore, once the physiological and safety needs are satisfied, money will tend to decline in importance as a primary motivator of individual human behavior. These first two needs are increasingly satisfied today.

The 'attrition' of money motives from primary to secondary importance becomes quite heavy after substantial incomes have been enjoyed for some time--a fact to be reckoned with as we move toward an increasingly prosperous society with a more broadly based middle class (16, p. 166).

As a result, acceptance, esteem, and self-realization needs have become increasingly important motivators today.

Herzberg has reinforced this concept of a satisfied need losing its motivation value. His work reveals that individuals are influenced by two different factors which he calls "hygienes" and "motivators" (18).

"Hygienes" refer to the environment such as company policy, administration, and salary while "motivators" are satisfactions derived from the work itself such as achievement, responsibility, and recognition. The "hygiene" factors cannot provide satisfaction in themselves but a minimum must be provided in this area or they will generate dissatisfaction. They are insignificant when fulfilled. In contrast "motivators" provide satisfaction and are significant even when gratified, representing insatiable needs.

Both Maslow and Herzberg have pointed out the declining importance of money in performing its traditional role as the primary factor in stimulating performance due to the rise of the middle income class. It is still a very important factor but its role has shifted to that of a "hygiene" factor. As long as an acceptable minimum level

is provided, it has little influence on behavior. However, if this minimum level is not reached, money once again becomes an active factor. In other words money now serves a "maintenance" role rather than a "motivator" role.

Research has shown that increased motivation improves performance up to a certain point. However, increases beyond this point will not raise performance and may, in fact result in a decrease.(5, p. 262-265; 35, p. 34). Vroom gives two reasons for the possible decline in performance with too high motivation. First, extremely high motivation may result in anxiety over failure. In addition, the highly motivated person tends to narrow his point of view to the attainment of a particular goal to the exclusion of all other features of the situation. For complex tasks, a broader point of view may be vital to solving the problem.

Another area where research by behavioral scientists has been pursued is the differences in motivation of different levels of managers. Porter, in his study interviewed 1,916 managers from five levels of management: 1) presidents; 2) vice-presidents; 3) upper-middle management; 4) lower-middle managers; and 5) lower managers. His findings indicated increases in the needs for self-actualization and autonomy as one gets higher in the management level. However, there were no differences in the importance of the social, esteem, and security needs with differences in the managerial level

(31).

Pellegrin and Coates interviewed 50 executives and 50 first level supervisors in their search for feelings on what constitutes career success. Career success was viewed differently by these two groups. The executives valued personal accomplishment and esteem while the supervisors held respect, and happiness and security on the job as important (29).

A brief review of many of the studies contrasting motivation at different levels of management is given by Vroom (35, p. 25-28).

He concludes,

There also appears to be some difference in motivational patterns associated with level of management. Higher-level managers report stronger desires for personal growth and development and for power and authority in their position than do lower-level managers (35, p. 28).

Economic Theory and Motivation of Business Enterprise

Economic theory assumes the business firm is motivated solely by profits. The level of the profit objective is assumed to be the maximum possible. At least three reasons support profit maximization as an objective. First, it is the generally assumed formal purpose for which a business firm is established. Individuals who supply capital to an organization are generally not interested in the project involved, but rather in receiving the greatest return for their capital. Second, profits are the assumed stimulus for the

economic theory of the firm to create the greatest economic welfare. Third, profit maximization generally provides a relatively unambiguous criterion for business decision-making in contrast to approaches calling for the simultaneous satisfaction of multiple firm objectives, some of which would be very difficult to quantify.

In the case of perfect competition, profit maximization is a reasonable assumption. The small size of each firm makes it unable to influence the market. Instead the market dictates the prevailing price and the firm becomes a price-taker. When new technology is introduced, costs of production are lowered and the market mechanism lowers price to the same level. Assuming the firm wants to survive, it has no choice but to adopt the new technology. A firm which did not undertake the change would be selling its product for less than the cost of production. The firm is forced to act as a "pure profit-maximizer." His only alternative is going out of business.

The degree of motivation to achieve profits in perfect competition is not discussed as such in the economic literature. However, because of the high intensity of competition or lack of "behavioral slack," it is apparently assumed the level of motivation will be the highest possible. Each entrepreneur in perfect competition must be highly motivated (possibly "maximum" motivation) to achieve profits for the same reason the level of the profit objective must be at the maximum. If the level of motivation or the level of the profit

objective is less than the maximum, the firm will be forced out of business by its highly motivated competitors.

Oligopoly theory also assumes business firms maximize profits. However, now each firm has some market power. Because the market grants the firms some "behavioral slack" in this situation, the level of motivation to achieve profits need not be at a maximum for survival. Excess profits can be generated in the long run. These profits may finance pursuit of other objectives and/or allow the entrepreneur to be satisfied with lower than maximum possible profits.

Business Theories and Motivation of Business Enterprise

The factual existence of profit maximization or multiple objective motives is relatively unimportant in the formulation of a theory to predict economic performance. Rather, of importance is whether the assumptions make the theory a useful predictive device. In the case of perfect competition, the assumption of profit maximization works whether, in fact, it conforms to reality or not.

With oligopolistic competition this same assumption produces a theory which performs less desirably. Here, no necessity for the maximization of profits for survival exists. Therefore, many writers have suggested as an alternative the possibility of multiple objectives in the study of firm behavior. For example, Drucker defines five survival areas "in which each business, to survive, has to reach a

standard of performance and produce results above a minimum level" (12, p. 84). Then he goes on to say,

Indeed, the most dangerous oversimplification of business enterprise may well be that of the 'one yardstick' whether 'return on investment,' 'market standing,' 'product leadership,' or what have you. At their best these measure performance in one genuine survival area. But malfunction or failure in any one area is not counterbalanced by performance in any other area, just as a sturdy respiratory or circulatory system will not save an animal if its digestive or nervous system collapses. Success, like failure, in business enterprise is multidimensional (12, p. 88).

In the following material, some suggestions for motives other than profit maximization will be examined.

Baumol suggests firms maximize sales subject to a minimum profit constraint.

So long as profits are high enough to keep stockholders satisfied and contribute adequately to the financing of company growth, management will bend its efforts to the augmentation of sales revenues rather than to further increases in profits (4, p. 46).

He reasons declining sales may cause the following: (1) consumers will shun a product declining in popularity; (2) the money market will become less receptive to the desires of the firm; (3) distributors may leave the firm; (4) strain on personnel relations due to firing of employees; (5) loss of monopoly power and the power to develop competitive counter strategy; and (6) vulnerability of the firm to worsening business conditions. In addition, he reasons executive salaries seem to be closely correlated with the scale of operations.

So for pure self-interest, management would be inclined to maximize sales (4, p. 46).

Viewed from the study of management decision-making, Drucker outlines a plan of management by objectives. "Objectives are needed in every area where performance and results directly and vitally affect the survival and prosperity of the business" (11, p. 63). He believes these objectives must be the same, in general, for each and every business and yet different performance and results are needed in each objective area for any particular business. The eight key areas, which he feels are common to all business, are: (1) Market standing; (2) Innovation; (3) Productivity; (4) Physical and financial resources; (5) Profitability; (6) Manager performance and development; (7) Worker performance and attitude; and (8) Public responsibility.

Rothchild concludes that the problem of a theory for duopoly and oligopoly market situations cannot be suitably solved within the framework of existing price theory. Under pure competition a firm can affect its security only by maximizing profits, and with a monopoly security is, "part of the definition." However, with a duopolist or oligopolist there are both, "the desire for achieving a secure position as well as the power to act on this desire" (33, p. 308). He cites three areas, which can be validated by observation, which shows that security overrides profit maximization for duopolists and oligopolists.

Security maximization results in rigid rather than fluctuating prices, over-sized rather than optimum-sized firms, and practically unconditional reinvestment within the firm rather than funds invested in response to expected returns (33, p. 309).

Market position is an objective of some firms for two reasons:

(1) The abler men in the organization may be lured to the expanding firms. . . . and (2) . . . in an oligopolistic market, the share of the market is an important determinant of the relative strength of a firm's bargaining power in the quasi-bargaining relationship, thus affecting a firm's ability to maintain the competitive conditions most favorable to it (6, p. 234-footnote).

Expansion or size may be sought to improve the firm's bargaining power in both its buying and selling transactions. Expansion by vertical integration increases the number of points where bargaining power may be used advantageously, at the same time decreasing the number of points at which it need be used (6, p. 236-240).

Cooper observes that in addition to profit considerations, "the facts of everyday business" suggest balance-sheet considerations. (8, p. 1221). These balance-sheet considerations include liquidity and control maintenance.

After all, the entrepreneur is not interested in maximizing profits [of the firm] per se. It is his [own] profits that he seeks to maximize. Loss of control in the pursuit of profits [of the firm] may succeed only in maximizing someone else's profits (8, p. 1207).

Many business writers have emphasized the social responsibility of business. For example, Eels states,

In the opinion of many, both the share owner and the corporation as an entity have social responsibilities that demand from wealth accumulators such as the business corporation, contributions both of knowledge and money to society generally. Not a few business leaders themselves share this opinion (13, p. 72).

This emphasis on the social responsibility of business has increased rapidly in recent years and promises to increase still more--with little knowledge of the likely impact.

One of the leading suggestions for an alternative to a theory based on maximization behavior is a theory based on satisficing behavior. Perhaps the principal proponent of a satisficing model, Herbert Simon, says, ". . . models of satisficing behavior are richer than models of maximizing behavior because they treat not only of equilibrium but of the method reaching it as well" (34, p. 263). Anthony gives difficulty and immorality as two reasons why businessmen strive for less than maximum profits (2). McGuire feels that businessmen satisfice rather than maximize because they possess "bounded rationality." He describes their behavior as striving for a "normal profit," charging a "fair price," and maintaining their "share of the market" (23, p. 182).

Business firms pursue a number of objectives simultaneously or successively according to Lester. Priorities may change over time so new balances may have to be drawn between these conflicting objectives. According to him these objectives include:

. . . 'satisfactory' or 'reasonable' profits, maximum possible profits, security and convenience of the existing management, achievement and maintenance of sufficient liquidity to assure the firm's financial safety, and maintenance of the firm's market position or its established share of the industry's total sales' (21, p. 483).

In addition, he says,

. . . the particular goals and the management's strength of desire to attain them may vary with the age and degree of maturity of the firm, the management, and the industry; with the extent and kinds of pressure from stockholders, creditors, and labor; and with the attitude of the community, the customers, the suppliers, the employees, and competitors toward the firm and its management. Attitudes, supported by organizational influences and pressures, may be very influential, especially where the management is sensitive to outside opinion and seeks to avoid difficulties for itself (21, p. 483).

Dent interviewed 145 business establishments, including some which were part of a multi-unit company. In talking with either the chief executive or his deputy, this question was asked: "What are the aims of top management in your company?" (10, p. 368). In the response, one-fourth of the managers gave only one objective and one-sixth mentioned more than three. The principal objectives mentioned were: (1) to make money, profits, or a living; (2) to pay dividends to stockholders; (3) to grow; (4) to be efficient, economical; (5) to meet or stay ahead of competitors; (6) to operate or develop the organization; (7) to provide a good product, public service; (8) to contribute to the community, community relations; and (9) to provide for the welfare of employees: a good living, security,

happiness, good working conditions.

Garoian and Haseley maintain that a business should have a statement of intent in each of the following primary areas: geographic limitations of the business, market standing, innovation, productivity, physical and financial resources, profitability, manager performance and development, worker performance and attitude, and public responsibility (15).

Cyert and March are concerned with the formulation of objectives. They include in their discussion an appreciation of the informal theory of the organization which holds that individuals have objectives but groups of individuals do not. They take issue with the two traditional methods of formulating objectives: (1) the objectives of the organization are those of the entrepreneur who enforces conformity on the staff with the use of side payments and a system of internal control; and (2) defining a common objective which is shared by all members of the organization by consensus. They feel the joint preference ordering suggested by these two methods is unrealistic. Contrary to the clear preference ordering usually assumed, there is uncertainty on subobjectives and in many cases there is conflict between the objectives (9).

They outline three ways in which the objectives are determined: (1) the bargaining process by which the composition and general terms of the coalition are fixed; (2) the internal organizational process of

control by which objectives are stabilized and elaborated; and (3) the process of adjustment to experience by which coalition agreements are altered in response to environmental changes (9, p. 29).

The result is a set of multiple objectives which take the form of an aspiration level rather than the imperative to maximize or minimize. This aspiration level changes in response to experience. Cyert and March have found that the members of the organization give their attention to only a small subset of the demand on them at any given point in time. In this way the organization is able to survive with a large set of conflicting objectives because, "they rarely see the conflicting objectives simultaneously" (9, p. 35).

There has been little research to determine the relationship between multiple objectives, motivation and the economic performance of the firm. One study by Nelson concerned the boards of directors in a group of farm supply cooperatives (27). He found no cases where the objectives had been well thought out and were written down. His method of determining the cooperatives' objectives was to synthesize them by aggregating the objectives of the individual directors.

In Nelson's study, cooperatives which were primarily oriented toward growth, innovation, and competitive power had a higher return on investment, a higher percent net savings per sales dollar, more rapid sales growth, and appeared to be more adaptable to change.

Cooperatives primarily oriented toward avoiding risk and those with no consensus on objectives were weaker financially, had relatively slow sales growth, and were less adaptable to change.

Going a step further, Reeder differentiated between the "level of objectives" and the "level of motivation to achieve the objectives" (32). The level of objectives refers to "maximum" profits or "satisfactory" growth. In contrast, the level of motivation to achieve the objective refers to how strongly the firm wants to maximize profits. Generally, economists and business theorists have not given attention to separating the two concepts.

Reeder's research attempted to evaluate the relationship between the firms' level of motivation to achieve objectives and the firms' economic performance. The firms evaluated in this project were independent retail grocery stores. The owner-managers were interviewed to determine both the objectives of the entrepreneur (the business firm) and his level of motivation to achieve these objectives.

Reeder's results show firms pursuing many objectives. The relationship between the firms' specific primary objectives and the firms' economic performance was not close. He concludes the entrepreneurs' level of motivation to achieve the objectives is more crucial in predicting economic performance than the objectives themselves. The level of motivation varied widely among objectives pursued by any given firm. Also, the level of motivations to

achieve any given objective varied widely among firms.

Generally speaking, the higher the firms' level of overall motivation and the higher firms' motivation to achieve individual objectives, the larger was the firm, the higher its relative use of debt, the more efficient it was, and the higher were its profits (32, p. 142).

Seven objective areas were identified by Reeder where the firms' levels of motivation to achieve individual objectives were compared to economic performance. These were profit, growth, innovation, public responsibility, market position, management performance, and employee performance.

The following relationships between firms' levels of motivation to achieve individual objectives and firms' economic performance were positive. The level of motivation to achieve the profit objective was closely related to the firms' size, growth, operating efficiency, and profitability. The levels of motivation to achieve the innovation and public responsibility objectives were closely related to the firms' size and profitability respectively. The level of motivation to achieve the market position objective was closely associated with the firms' size, growth, operating efficiency, and profitability. The levels of motivation to achieve each of the growth, management performance, and employee performance objectives were closely related to the firms' size, operating efficiency, and growth (32, p. 99-102).

III. PROCEDURES

This study is concerned with examining internal factors which affect the economic performance of the cooperative, specifically organizational objectives. Consequently, measures were needed of economic performance variables and the cooperatives' objectives.

Organizational objectives, for the purpose of this project, take on a specific meaning. Objectives are the purpose, targets, or reason for the existence of the organization. As a statement of long-run ends, they are a guide to all within the organization. They are purposely general in nature.

Because of the general and long-run nature of objectives, intermediate guides or benchmarks are needed along the way. These are goals or subobjectives and are not to be confused with objectives. These represent more specific ends for intermediate time periods. They are steps in reaching the long-run objectives of the organization. They are derived after objectives have been formulated and represent specific mileposts or courses of action to be taken to reach the objectives (15, p. 32-33).

For this project seven objectives were assumed for all cooperatives. This predetermined set of objectives was not meant to include all possible objectives. Many others were considered. However, it was felt that each of the objectives selected was basic in the

plans of all businesses.

Power Centers

Power centers are groups within a business organization who possess some decision making power as a group. Three power centers within each sample cooperative were examined. They are:

Top Management - The general manager of the cooperative.

Board of Directors - All members of the official board of directors.

Key Employees - Middle management personnel who are required to possess specialized knowledge in the performance of their job such as marketing and financial managers, commodity department managers, and/or those who have supervisory responsibilities. Also, key staff personnel such as office managers and controllers.

Economic Performance Variables

The cooperatives' economic performance areas measured in this study were: (1) size; (2) rate of growth; (3) profitability; (4) efficiency; and (5) debt position. In the performance areas of size, profitability, efficiency, and debt position, the data used were the averages for the years 1967-69 inclusive, except for Cooperative 21. In this case, data were only available for the years 1968 and 1969, so the average for these two years was used. Information from 21 cooperatives was used for all performance areas except the rate of

growth in which Cooperative 21 could not be used because of lack of adequate data.

The range, mean, median, and standard deviation are given for the data in each performance area in Appendix Table A.

Listed below are the specific variables measured in each economic performance area.

1) Size of cooperative (dollars)

- a) Total assets - average 1967-69
- b) Sales volume (annual) - average 1967-69

2) Rate of growth of cooperative - 3 years (dollars)

- a) Percent change in total assets - average 1967-69
- b) Percent change in annual sales volume - average 1967-69

3) Profitability of cooperative

- a) Net margin (dollars) - average 1967-69
- b) Net margin as percent of sales = $\frac{\text{Net Margin}}{\text{Sales}}$ - average 1967-69

4) Efficiency of cooperative

- a) Sales per employee = $\frac{\text{Sales}}{\text{Number of Employees}}$ - average 1967-69
- b) Fixed asset turnover = $\frac{\text{Sales}}{\text{Fixed Assets}}$ - average 1967-69

5) Debt position of cooperative

- a) Current ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ - average 1967-69
- b) Total debt ratio = $\frac{\text{Total Debt}}{\text{Total Assets}}$ - average 1967-69

Market Structure Variables

Two market structure characteristics, both indicators of the degree of seller concentration, were measured in this study. They were: (1) the number of competitors in the market area, and (2) the largest single share of sales in the market area expressed as a percentage of total sales.

The total number of competitors in the market area includes the competitors in all of the product lines of the cooperative. The percent share of sales refers to the product line which accounted for the major share of the cooperative's farm supply business. It was an estimate of the largest share of the market sales of this product line by any business in the market area whether it was by the cooperative in the sample or a competitor.

Objective Motivation Variables

This study was not concerned with the level of the cooperatives' objectives, but rather, the levels of motivation to achieve the objectives. The level of motivation to achieve an objective is the strength of feeling an individual has about the accomplishment of the objective, both how strongly he wants to accomplish it, and how diligently he wants to pursue that end. For simplification, the term "objective motivation" will be used interchangeably with the term "level of

motivation to achieve an objective" in this study.

Upon review of the business literature, the following seven objective areas were taken for use in this study. In each case, the level of motivation to achieve the objectives was measured.

- 1) Growth Motivation - To expand the size of the cooperative, measured by the strength of feeling about:
 - a) Increasing sales
 - b) Increasing total assets
- 2) Innovation Motivation - To be "first" in the market, measured by the strength of feeling about the early development and/or introduction of new and different:
 - a) Products and services
 - b) Practices, procedures and policies
- 3) Profitability Motivation - The amount of monetary returns to the cooperative, measured by the desire to achieve a high:
 - a) Return on investment
 - b) Total net profit
- 4) Personnel Performance and Development Motivation - Continual improvement of the performance capability of personnel, measured by the attitude toward top management, key employees, and the board of directors participating in:
 - a) Training and development programs
 - b) Review of industry and general business publications

- c) Attendance of conferences, workshops, and seminars
- 5) Competitive Power Motivation - Influence, both with competitors in the market area and with suppliers, measured by the strength of desire to have high:
- a) Bargaining strength with suppliers
 - b) Influence in setting prices in the market area
 - c) Influence in setting standards on the quality of products and services in the market area
 - d) Share of sales in the market area
- 6) Community Citizenship Motivation - The social responsibility of the cooperative, measured by the strength of feeling about:
- a) Providing employment as a responsibility to the community
 - b) Forcing local competitors out of business
 - c) Participation in community organizations and activities
- 7) Efficiency Motivation (physical and financial) - Optimizing all input and output relationships in the operation of the cooperative, measured by the strength of feeling about:
- a) Lower-cost operation
 - b) Sales per employee
 - c) The working capital situation
 - d) Inventory control
 - e) Credit control

Motivation Conformity

Conformity is the consistency of the level of motivation to achieve objectives. It is measured both within and among power centers in this study. The "within" conformity compares the levels of motivation of individuals within power centers while the "among" conformity compares the average level of motivation among the three power centers.

The within conformity was measured for two power centers, the key employees and the board of directors. Within conformity was not measured for top management since only one individual was involved.

The measure of conformity within the key employees and the board of directors is an indicator of the similarity of the level of motivation to achieve each objective by the individuals within the power center. There may be distinct differences between the power centers in different cooperatives on the consistency of the motivation of the individuals within the power center. To illustrate, assume the key employees in each of two different cooperatives have the same average level of motivation to achieve power. However, the individuals in the first cooperative may have identical levels of motivation while those in the second cooperative may have widely dissimilar levels. The within conformity measures will indicate

these possible differences.

Conformity among power centers is concerned with the variability among the levels of motivation for the power centers. The three power centers within a cooperative may have identical or widely dissimilar levels of motivation among them and the among conformity measure is an indicator of this similarity or dissimilarity.

Sample

The business units investigated in this study were local, independent, farm supply cooperatives in the Pacific Northwest. These cooperatives were primarily engaged in the farm supply business, specializing in petroleum and chemicals, fertilizer and seed, or machinery. Substantial marketing functions, primarily wheat marketing, were carried out by three of the cooperatives. In none of these cases was the business of the cooperatives primarily marketing.

In addition to the type of business of the cooperatives, a size criterion (sales and total assets) was used in the selection of the sample cooperatives. Of the possible farm supply cooperatives for use in the sample, only the relatively largest were selected. It was felt increased size was related to the presence of key employees in the cooperatives. In the final sample, the average number of key employees in the cooperatives was five.

From a list of farm supply cooperatives in the Pacific Northwest

representing a broad range in size, 56 were selected for use in the sample. After these were contacted, several were eliminated to bring the final sample to 21 cooperatives. The estimated number of farm supply cooperatives in the Pacific Northwest, which met the qualifications of the project, was approximately 150.

Data Collection

Initial contact was made by mail with the general managers of the 56 cooperatives selected for the sample. The study was explained in detail and formal questionnaires were enclosed to obtain information on the economic performance of the cooperatives, the objective motivations of top management, and the number of competitors in the market area. The economic performance questionnaire used is shown in Appendix B and the objective motivations questionnaire used is shown in Appendix C.1. If the general manager cooperated, he filled out these questionnaires, returned them, and supplied a list of the board members and key employees of his cooperative. A careful definition of key employees was enclosed for this purpose.

Second, the general manager was contacted by phone for an estimate of the share of the sales of the cooperative and the competitors in the cooperative's leading product line and verification of the number of competitors in the market area. The resulting market structure variables for each cooperative market are given in

Appendix D. In many cases these phone calls were also used to clarify parts of the performance data, especially with reference to the total debt position.

The third step involved sending questionnaires on objective motivations to the individual key employees and board members of those cooperatives whose general managers had agreed to cooperate with the study. At least a 50 percent response was estimated as necessary within each of these two power centers (key employees and board of directors) before the cooperative could be used in the final sample. This minimum was achieved in all cases and in 14 of the 21 cooperatives in the sample, 75 percent or more of the individuals within each of the power centers responded.

The objective motivations questionnaire was designed to measure the level of motivation to achieve each of the predetermined objectives. The type of questions included ranking, multiple-choice, open-ended, and situational cases. The questions were primarily designed for a specific answer to enable the computation of quantitative measures of the level of motivation of each individual to accomplish each objective. Substantial effort was spent in composing the questionnaire in an attempt to get the individuals' "depth of feeling" about each objective area.

Five to eight questions were asked in each objective area. In many cases the same question was used for more than one objective

area. The questions relating to each objective area are shown in Appendix Table C.2.

Method of Analysis

Stepwise linear regression analysis was used to evaluate the relationship between the cooperatives' selected economic performance variables and each of the following: the individual power centers' levels of motivation to achieve objectives, the cooperatives' corporate levels of motivation to achieve objectives, conformity of the levels of motivation to achieve objectives within and among power centers, and market structure variables. The independent variables were the levels of motivation to achieve objectives, the conformity levels, and the market structure variables. The dependent variables were the economic performance variables.

The assumptions of linear regression analysis are an infinite population, random sampling, and that the population regression of the dependent variable on the independent variable is linear. Also, the error term is a normally distributed random variable with mean zero and variance σ^2 and the error terms are uncorrelated.

The population was approximately 150 farm supply cooperatives in the Pacific Northwest. The sample was 21 cooperatives or 15 percent of the population. This is sufficient sample size to allow inference about the population. The sample was not randomly selected, but

rather on the basis of characteristics previously mentioned.

The statistical significance of the independent variables was determined by the Students T test, R^2 , and the standard deviation. The Students T test was used to test the null hypothesis that there is no relationship between the independent and dependent variables ($\beta_1 = 0$) against the alternative that there is some relationship ($\beta_1 \neq 0$).

The resulting R^2 levels will frequently appear to be low to those acquainted with research from the physical sciences. However, the social sciences are more used to working with lower R^2 values due, in part, to measurement errors. In addition, it is understood in this study that the levels of motivation to achieve objectives and the market structure variables are only two of many possible factors related to economic performance.

The simple correlation coefficients were examined to evaluate the interrelationships between the independent variables. This is a subjective test and therefore the correlation coefficients for the study are listed in Appendix E.

IV. COOPERATIVES' LEVELS OF MOTIVATION TO ACHIEVE OBJECTIVES

To evaluate the levels of motivation to achieve objectives (objective motivations) a common index was applied to all objective motivation questionnaires. The answers to each question were scored numerically as to how strongly they reflected the level of motivation to achieve the objective in question. One such ranking used was the range 0-4 in which four represents a high level of motivation to achieve the objective in question. Zero indicates no motivation to achieve the objective. Several questions were asked for each objective area, with each scored in this manner. The questions related to each objective area are shown in Appendix Table C. 2.

Scores for all questions relating to a given objective area were totalled. This gave a single number or gross index for each individual which reflected his motivation concerning that specific objective. This score was divided by the total score possible for that objective and multiplied by 100 to develop the final index for that objective. The final index was used rather than the gross index to allow possible comparisons among objective motivations within a given power center. The method is illustrated by an actual case for the power objective for top management of Cooperative 20 in Figure 1.

The resulting index may range from 0-100 for all objective areas except innovation and growth. The range for innovation was

3-100 and for growth 6-100. The lower end of these final index ranges is greater than zero because some of the questions relating to these two objective motivation areas have scores greater than zero. For example, question eight relating to innovation motivation was scored in the range 1-4.

Questions Concerning the Competitive Power Objective	Scoring for the Questions				
6	0	1	2	3	④
13	0	1	2	3	④
21	0	1	2	3	④
28	0	1	2	3	④
32	0	1	2	③	4
34	①	-	-	-	4
40	0	1	2	③	4
Score		= 22			
Total Possible Score		= 28			
Index of Motivation		= 22/28 = .79			
		.79x100 = 79			

Figure 1. Method of Computing Level of Motivation Index

The key employees' and board of directors' power centers generally contained several individuals. The average of the individuals' indices of levels of motivation within each power center was used to represent the level of motivation for the power center as a group.

The method of computing the average index is illustrated for the power objective of key employees for Cooperative 20 in Figure 2.

Members of the Key Employees Power Center	Index of Competitive Power Motivation
1	68
2	64
3	61
4	71
5	64
6	75
7	68
Total = 471	
Average Level of Motivation = $471 / 7 = 67$	

Figure 2. Method of Computing Power Centers' Average Levels of Motivation

Extreme care should be used in comparing levels of motivation among objectives within a given power center for it cannot be safely assumed the set of questions in the objective areas are comparable in quality as to measuring the desired factor. However, the results can be much more reliably compared between cooperatives for a given power center and objective and also between power centers for a given cooperative and objective. For example, the levels of motivation for innovation in Cooperative 1 are quite similar for the three power centers: 50, 51, and 52. On the other hand, the levels of motivation of top management to innovate in Cooperatives 1 and 3 contrast sharply, from 50 to 28.

The levels of motivation for the power centers in each cooperative are given in Tables 1, 2, and 3.

TABLE 1. Top Managements' Levels of Motivation to Achieve Objectives

	Objective Motivations						
	Cooperative	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power
1	50	57	46	61	63	79	47
2	47	54	43	56	63	61	74
3	28	50	33	42	69	57	35
4	56	64	48	64	72	61	41
5	41	79	40	64	53	75	62
6	53	79	43	47	66	75	65
7	50	82	58	36	75	75	59
8	50	46	45	58	53	50	53
9	66	18	56	61	63	82	41
10	50	43	60	81	78	82	26
11	56	93	58	50	75	75	50
12	47	36	39	53	75	57	44
13	41	68	37	47	75	75	44
14	56	82	54	56	75	68	44
15	38	50	44	33	50	61	53
16	47	75	48	42	72	57	44
17	47	75	44	53	69	75	44
18	63	43	57	67	78	61	44
19	47	54	42	53	63	57	38
20	59	36	61	61	69	79	41
21	69	50	30	50	56	64	35

TABLE 2. Key Employees' Average Levels of Motivation to Achieve Objectives

	Objective Motivations							
	Cooperative	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
1	51	49	47	56	67	68	39	
2	43	50	44	63	55	63	46	
3	46	55	53	59	56	61	41	
4	53	56	50	61	62	74	46	
5	55	71	39	48	59	64	51	
6	47	75	51	52	67	71	58	
7	47	63	61	61	71	79	53	
8	43	59	42	59	55	60	39	
9	28	38	45	47	78	61	59	
10	59	71	54	67	59	86	32	
11	58	56	57	60	61	78	49	
12	34	68	48	50	69	61	44	
13	58	56	51	49	66	65	45	
14	54	54	54	45	65	59	54	
15	53	56	50	47	63	65	55	
16	59	70	47	55	69	74	44	
17	55	54	51	62	61	68	51	
18	71	47	55	63	54	63	49	
19	53	64	44	56	66	57	35	
20	50	47	51	58	67	67	47	
21	60	63	52	49	65	74	49	

TABLE 3. Board of Directors' Average Levels of Motivation to Achieve Objectives

	Objective Motivations						
	Cooperative	Innovation	Profitability	Employee	Community	Efficiency	Competitive
				Performance and Development	Citizenship		Power
1	52	46	50	55	56	72	46
2	54	44	53	46	66	72	56
3	46	52	52	52	59	66	39
4	55	49	50	54	64	68	41
5	44	52	42	47	53	63	46
6	52	55	41	52	62	68	52
7	55	57	51	58	65	60	39
8	54	55	39	53	58	65	55
9	48	46	44	47	54	60	49
10	56	68	48	62	70	68	41
11	52	49	56	54	70	79	47
12	46	63	50	52	64	66	47
13	53	49	47	54	64	67	43
14	55	62	51	38	66	62	42
15	52	55	53	52	69	71	47
16	47	50	45	49	66	64	37
17	45	54	47	43	65	59	40
18	51	43	60	74	67	64	49
19	52	44	41	46	66	63	42
20	51	46	51	52	75	73	49
21	58	52	43	40	73	78	49

In addition to levels of motivation for each of the individual power centers, a corporate level of motivation was computed for the cooperative. The corporate level of motivation is the sum of the level of motivation for top management and the average levels of motivation for both the key employees and board of directors for each objective motivation within each cooperative. For example, the previously mentioned motivation levels for innovation in Cooperative 1 were 50, 51, and 52 in the three power centers. These sum to a corporate level of motivation to achieve innovation for Cooperative 1 of 153. It was assumed the corporate levels of motivation to achieve objectives would represent a consensus on objective motivations of the top managers, key employees, and board of directors of the cooperative. These corporate levels of motivation are given in Table 4.

TABLE 4. Corporate Levels of Motivation to Achieve Objectives

	Objective Motivations							
	Cooperative	Innovation	Profitability	Employee	Community	Efficiency	Competitive	Growth
				Performance and Development	Citizenship		Power	
1	153	152	143	172	186	219	132	
2	144	148	140	165	184	196	176	
3	120	157	138	153	184	184	115	
4	164	169	148	179	198	203	128	
5	140	202	153	159	184	202	159	
6	152	209	135	151	195	214	175	
7	152	202	170	155	211	214	151	
8	147	160	126	170	166	175	147	
9	142	102	145	155	195	203	149	
10	165	182	162	210	207	236	99	
11	166	198	171	164	206	232	146	
12	127	167	137	155	208	184	135	
13	152	173	135	150	205	207	132	
14	165	198	159	139	206	189	140	
15	143	161	147	132	182	197	155	
16	153	195	140	146	207	195	125	
17	147	183	142	158	195	202	135	
18	185	133	172	204	199	188	142	
19	152	162	127	155	195	177	115	
20	160	129	163	171	211	219	137	
21	187	165	125	139	194	216	133	

V. CONFORMITY OF THE LEVELS OF MOTIVATION TO ACHIEVE OBJECTIVES WITHIN AND AMONG POWER CENTERS

Conformity of levels of motivation to achieve objectives was measured within the two power centers, key employees and board of directors. This conformity level was computed by taking the absolute differences between the average level of motivation for a power center and the levels of motivation of each of the individuals within the power center. These absolute differences were averaged to provide an index of the degree of conformity within the power center. A high index indicates large differences in objective motivation levels among individuals within a power center, i. e., low conformity of motivation levels among individuals.

Within the key employees power center, four of the cooperatives (Cooperatives 9, 10, 12, and 19) had only one key employee who responded to the study by filling out the objective motivations questionnaire. For these cooperatives, the differences of motivation between the individuals in the key employees power center did not exist and were represented by zero.

The indexes of conformity within the key employees and board of directors power centers are given in Tables 5 and 6.

Inspection of these conformity tables reveals some cooperatives had consistently higher levels of conformity than did others.

TABLE 5. Key Employees Power Center Objective Motivation Conformities Among Individuals

	Objective Motivations							
	Cooperative	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
1		6.0	9.9	6.6	4.3	10.0	7.3	9.7
2		4.5	4.0	4.0	6.5	4.5	5.5	7.5
3		3.3	10.0	6.3	10.0	4.3	4.7	6.0
4		8.5	12.5	2.0	5.5	1.5	8.3	9.3
5		5.9	14.6	6.0	7.4	10.5	7.5	7.3
6		7.5	10.8	6.0	9.0	12.8	2.5	6.0
7		6.0	12.5	1.0	3.0	4.5	0.0	3.0
8		5.7	3.0	5.0	6.7	13.0	1.7	4.7
9		0.0	0.0	0.0	0.0	0.0	0.0	0.0
10		0.0	0.0	0.0	0.0	0.0	0.0	0.0
11		5.6	5.8	4.2	5.2	7.6	13.4	10.8
12		0.0	0.0	0.0	0.0	0.0	0.0	0.0
13		9.6	10.2	6.6	12.0	10.0	9.6	7.2
14		8.5	5.3	3.0	5.8	6.0	9.0	11.3
15		8.0	9.4	6.0	7.8	4.6	14.8	9.2
16		10.0	12.6	5.4	7.4	8.6	8.6	8.0
17		11.6	12.0	8.0	11.8	8.0	11.4	13.6
18		14.0	8.3	8.3	7.5	4.5	3.5	5.8
19		0.0	0.0	0.0	0.0	0.0	0.0	0.0
20		6.4	7.8	5.3	10.1	7.0	3.7	6.4
21		9.6	10.2	3.1	6.8	8.0	7.5	8.2

TABLE 6. Board of Directors Power Center Objective Motivation Conformities Among Members

	Objective Motivations							
	Cooperative	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
1		4.5	13.3	3.0	5.0	4.8	5.5	6.0
2		4.5	10.9	3.4	7.9	8.3	7.6	13.0
3		4.5	8.2	4.7	3.8	9.0	3.5	3.5
4		11.2	12.9	4.8	6.6	11.0	8.1	7.4
5		5.6	21.4	2.2	6.4	6.2	4.0	12.0
6		9.4	8.3	8.6	8.1	9.9	6.6	11.3
7		5.3	6.8	6.8	8.8	3.0	5.0	7.3
8		3.3	8.7	2.3	3.0	9.0	6.3	6.7
9		4.6	7.0	3.6	3.4	8.2	3.6	9.8
10		7.7	2.3	0.3	4.3	4.7	7.3	16.0
11		7.8	5.7	3.3	6.5	6.2	9.0	6.0
12		11.8	8.2	6.0	4.4	5.6	6.4	8.8
13		6.8	8.3	3.8	5.3	6.2	9.7	6.0
14		4.3	15.0	5.5	11.5	3.3	4.5	2.8
15		3.3	8.7	2.0	10.0	12.3	2.3	18.0
16		9.6	14.6	6.0	9.6	8.3	9.0	6.5
17		8.0	22.0	3.3	9.8	7.0	9.0	11.3
18		3.8	5.3	4.3	18.5	6.3	0.0	8.3
19		2.3	6.5	9.5	13.3	8.0	1.3	4.8
20		6.0	4.2	5.0	6.3	6.7	6.0	10.0
21		7.1	12.6	7.2	7.9	9.3	7.8	9.7

For example, in Table 5, Cooperative 17 showed greater differences in the motivation levels of the individuals in the key employees power center than did Cooperative 2. Also, differences in conformity levels are revealed among objectives. For example, in Table 5, the profitability objective of the key employees consistently showed greater differences among levels of motivation than did the employee performance and development objective of the key employees.

As described earlier, an index of the level of motivation to achieve each objective was calculated for each person in each power center. To arrive at the average level of motivation of each power center to achieve any given objective, the average of the motivation indices of all the persons in the power center was computed. The index of conformity of the level of motivation among the three power centers to achieve any given objective was computed by summing all the possible absolute differences among the average levels of motivation of the power centers to achieve that objective. High figures represent low conformity of motivation levels among the power centers.

The resulting conformity measures representing the conformity of motivation among power centers are given in Table 7.

Again there are differences among cooperatives as well as differences among objectives. For example, in Table 7, Cooperative 9 shows greater differences in motivation levels among its

TABLE 7. Objective Motivation Conformity Among the Three Power Centers

	Objective Motivations							
	Cooperative	Innovation	Profitability	Employee		Efficiency	Competitive	
				Performance and Development	Community Citizenship		Power	Growth
1	4	22	8	12	22	22	16	
2	22	20	20	34	22	22	56	
3	36	10	40	34	26	18	12	
4	6	30	4	20	20	26	10	
5	28	54	6	36	44	24	32	
6	12	48	20	10	10	14	26	
7	16	50	20	50	20	38	40	
8	22	26	12	12	10	30	32	
9	76	56	24	28	48	44	36	
10	18	56	24	38	38	36	30	
11	12	88	4	20	28	8	6	
12	26	54	22	6	22	18	6	
13	34	38	28	14	22	20	4	
14	4	56	6	28	32	8	26	
15	30	12	18	38	38	20	16	
16	24	50	6	26	12	34	14	
17	20	42	14	38	16	32	22	
18	40	8	10	22	48	6	10	
19	12	40	6	20	6	12	14	
20	18	22	20	20	16	24	16	
21	22	26	44	20	34	28	28	

power centers than does Cooperative 14. Also, in Table 7, the profitability objective shows greater differences in motivation levels among power centers than does the employee performance and development objective.

VI. RELATIONSHIP BETWEEN COOPERATIVES' ECONOMIC PERFORMANCE AND THE CORPORATE AND INDIVIDUAL POWER CENTERS' LEVELS OF MOTIVATION TO ACHIEVE OBJECTIVES

In this section the relationship is examined between cooperatives' economic performance and both the individual power centers' levels of motivation to achieve given objectives and the overall levels of motivation of all power centers combined (corporate levels of motivation) to determine: (1) the relationship between individual power centers' levels of motivation to achieve specified objectives and the cooperatives' economic performance; (2) the relationship between the corporate levels of motivation to achieve specified objectives and the cooperatives' economic performance; (3) differences among power centers' levels of motivation to achieve objectives; and (4) where possible, determine which power centers' levels of motivation to achieve objectives seem to have the greatest relationship with economic performance of the cooperatives.

The relationships between both the corporate and the individual power centers' levels of motivation to achieve objectives and each economic performance area, are presented in tables which will be referred to throughout this section. In addition, references will be made to Appendix Table A (Economic Performance Parameters), and tables in Appendix E (Simple Correlation Coefficients Between Objective Motivations).

Top Management

Size

Sales. Top managements' competitive power and growth motivations were negatively related to sales of the cooperatives while profitability motivation was positively related (Table 8). A unit increase in competitive power motivation was associated with a decline of \$156,000 in sales while a unit increase in growth motivation was associated with a slightly smaller \$129,000 decline in sales. In contrast, a unit increase in profitability motivation was related to a rise in sales of \$81,000.

The significance levels for the three top management objective motivations related to sales were relatively low, with the highest at the 85 percent level. These three objective motivations accounted for a cumulative R^2 of 20 percent, leaving 80 percent of the variation in sales to be explained by factors other than the specified objective motivations. Profitability motivation contributed about one-fifth of the total variation in sales accounted for by the objective motivation variables while competitive power and growth motivations contributed about 40 percent each.

The constant for the significant objective motivation variables related to sales was \$14,907,000 compared to a median of

TABLE 8. Relationship Between Top Managements' Levels of Motivation to Achieve Objectives and Size of Cooperatives

Size Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$000)	(%)
<u>Sales</u>				
Competitive Power ^a	1.498	85	-156	7.7
Profitability	1.396	82	+ 81	12.1
Growth	1.295	79	-129	20.0
Innovation		NS	+	21.1
Community Citizenship		NS	-	22.7
Efficiency		NS	-	23.1
Employee Performance and Development		NS	-	23.1
<u>Total Assets</u>				
Competitive Power ^a	1.479	84	- 69	7.0
Profitability	1.594	87	+ 41	13.4
Growth	1.302	79	- 58	21.3
Efficiency		NS	-	24.5
Innovation		NS	+	26.5
Community Citizenship		NS	-	29.0
Employee Performance and Development		NS	-	29.6

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Sales \$4,555,000
 Total Assets \$2,031,000

Constant for significant variables: Sales \$14,907,000
 Total Assets \$6,498,000

\$1,346,000 for the cooperatives in the sample (Appendix Table A). It seems a relatively high sales level may result from a zero level of motivation to achieve the group of objective variables, at least a zero level of growth and competitive power motivations. Increased sales might well be related to increasing profitability motivation.

Total Assets. Competitive power, profitability, and growth motivations of top management were related in the same manner to total assets of the cooperatives, another performance measure of size (Table 8). In comparison, if we assume the rise in total assets associated with a unit increase in profitability motivation was represented by an index of 1.0, then the change in total assets associated with a unit increase in competitive power motivation was -1.7, and -1.3 for a unit increase in growth motivation.

Again, the significance levels were relatively low, with the highest being at the 87 percent level. The cumulative R^2 for the significant objective motivations was 21.3 percent. The contribution to the total R^2 was approximately the same for each of the significant objective motivation variables.

The constant for the significant objective motivation variables related to fixed assets was \$6,498,000 and the median for the cooperatives in the sample was \$761,000 (Appendix Table A). A zero level of motivation for the group of significant objective motivations was related to a comparatively high level of total assets. However, the

results suggest increased levels of profitability motivation with no change in growth or competitive power motivations may be related to increases in total assets.

The positive relationship between profitability motivation of top management and the size of the cooperatives seems reasonable. Given relatively fixed unit margins, the avenue to higher profits would be a greater size of cooperative. However, the negative relationship between both competitive power and growth motivations and the size of cooperatives seems to depart from the motivation theory referred to in this study which states there is a positive relationship between the strength of motivation of an organism to achieve a given objective and the actual performance in that area. In this case, the causal relationship may well be reversed, with size of the cooperative affecting competitive power and growth motivation, rather than vice versa. Following this reasoning, smaller cooperatives, given the relatively fixed unit margins and lower total net margin associated with small cooperatives, would understandably be more highly motivated to achieve growth and competitive power to increase the profitability of the cooperatives and enhance their survival. Larger cooperatives, having perhaps achieved both growth and competitive power at least to some greater measure, may be more motivated to achieve other objectives of relatively greater importance to the organization.

Rate of Growth

Percent Change in Sales. Top managements' employee performance and development and growth motivations were positively related to percent change in sales of cooperatives while top managements' competitive power motivation was negatively related to percent change in sales (Table 9). The coefficients for employee performance and development and growth motivations in relation to rate of change in sales were 1.53 and .67 respectively which suggests increases in employee performance and development motivation were related to over twice the rate of change in sales as were increases in growth motivation. For a one unit increase in profitability motivation, the rate of change in sales fell by .45. So, an increase of about one-fourth of a unit of employee performance and development motivation would counter-balance the negative impact on sales growth of an increase of one unit of profitability motivation.

These three objective motivation variables accounted for a relatively high cumulative R^2 of 43.9 percent. Employee performance and development and growth motivations were the most powerful independent variables with respect to rate of change in sales with high significance levels (99 percent and 95 percent respectively) and relatively high contributions to the total R^2 , 24.4 percent and 14.9 percent respectively. In contrast, competitive power motivation was

TABLE 9. Relationship Between Top Managements' Levels of Motivation to Achieve Objectives and Rate of Growth of Cooperatives

Rate of Growth Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(%)	(%)
<u>Percent Change in Sales</u>				
Employee Performance and Development ^a	3.193	99	+1.53	24.4
Growth	2.103	95	+ .67	39.3
Competitive Power	1.151	74	- .45	43.9
Profitability		NS	-	47.0
Community Citizenship		NS	+	47.9
Innovation		NS	-	48.6
Efficiency		NS	+	49.6
<u>Percent Change in Total Assets</u>				
Growth ^a	2.414	97	+1.13	14.7
Profitability	1.187	75	- .31	23.5
Competitive Power	1.864	91	-1.00	29.7
Employee Performance and Development	1.636	87	+1.07	40.4
Efficiency		NS	+	43.3
Innovation		NS	-	46.2
Community Citizenship		NS	+	46.2

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Percent Change in Sales 15.1
 Percent Change in Total Assets 20.6

Constant for significant variables: Percent Change in Sales -59.8
 Percent Change in Total Assets -.83

significant at the 74 percent level and contributed 4.6 percent to the total R^2 .

Percent Change in Total Assets. Top managements' growth and employee performance and development motivations were positively related to the percent change in total assets of the cooperatives while their profitability and competitive power motivations were negatively related to the percent change in total assets (Table 9). The positive coefficients for growth and employee performance and development motivations with respect to rate of change in total assets were almost equal, 1.13 and 1.07 respectively. The negative coefficient for competitive power motivation was over three times the value of the negative coefficient for profitability motivation, -1.00 and -.31 respectively.

The most significant objective motivation associated with the rate of change in total assets was growth motivation (97 percent) followed by competitive power motivation (91 percent), employee performance and development motivation (87 percent), and finally profitability motivation (75 percent). Growth motivation, the highest contributor to the total R^2 , contributed approximately 1.4 times as much to the total R^2 as employee performance and development motivation, 1.7 times as much as profitability motivation, and 2.4 times as much as competitive power motivation. These four significant objective motivations accounted for a cumulative R^2 of 40.4

percent.

Profitability motivation seemed the least significant objective motivation in relation to rate of change in total assets with a low significance level and a relatively small contribution to the total R^2 .

There was evidence of interrelationships between some of the objective motivations associated with rate of growth which was suggested by relatively high simple correlations between these objective motivations. The simple correlation was .386 between growth and profitability motivations, and .450 between competitive power and employee performance and development motivations (Appendix Table E.1). This suggests cooperatives might not be able to manipulate these objective motivations independently, but would rather have to deal with them as a group realizing that changing one may well generate an automatic partial change in another.

Efficiency

Sales Per Employee. Top managements' innovation, growth, and competitive power motivations were negatively related to sales per employee while efficiency motivation was positively related to sales per employee (Table 10). A unit increase in innovation motivation was related to approximately 1.4 times the decline in sales per employee as was associated with a unit increase in either growth or competitive power motivation. Since they have coefficients of

TABLE 10. Relationship Between Top Managements' Levels of Motivation to Achieve Objectives and Efficiency of Cooperatives.

Efficiency Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Sales per Employee</u>				
Innovation ^a	1.660	88	-1,410	11.3
Growth	1.251	77	- 930	24.2
Efficiency	1.394	82	+1,350	29.6
Competitive Power	1.285	78	-1,060	36.2
Community Citizenship		NS	-	36.7
Profitability		NS	+	36.9
Employee Performance and Development		NS	+	36.9
<u>Fixed Asset Turnover</u>				
			(times yearly)	
Competitive Power ^a	1.911	93	+ .06	13.9
Profitability	2.210	96	- .03	20.4
Community Citizenship	2.431	97	+ .07	35.0
Employee Performance and Development	1.676	89	+ .06	44.7
Innovation		NS	+	47.9
Efficiency		NS	+	48.4
Growth		NS	+	48.6

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables:	Sales per Employee	\$34,500
	Fixed Asset Turnover	1.2 (times yearly)
Constant for significant variables:	Sales per Employee	\$176,700
	Fixed Asset Turnover	2.7 (times yearly)

approximately equal absolute value, although of opposite sign, unit increases in efficiency and innovation motivations would approximately offset each other with respect to sales per employee.

The significance levels for the objective motivation variables related to sales per employee were relatively low, with innovation motivation being the most significant at the 88 percent level. Of the cumulative R^2 of 36.2 percent accounted for by the significant objective motivation variables, innovation and growth motivation contributed 11.3 percent and 12.9 percent respectively, while efficiency and competitive power motivation each contributed approximately one-half these amounts, 5.4 percent and 6.6 percent respectively.

The constant for the significant objective motivations related to sales per employee was \$176,700 compared to a median of \$77,000 for the cooperatives in the sample (Appendix Table A). This relatively high level of sales per employee at zero levels of motivation suggests strongly that those top managers interested in increasing sales per employee might well deemphasize those objective motivations with negative relationships.

Fixed Asset Turnover. Competitive power, community citizenship, and employee performance and development motivations of top management were positively related to fixed asset turnover of the cooperatives while profitability motivation was negatively related (Table 10). Competitive power, community citizenship, and employee

performance and development motivations had approximately the same degree of positive relationships with fixed asset turnover. In contrast, and since profitability motivation had a negative relationship, it would take approximately twice the increase in level of profitability motivation to offset a given increase in any one of competitive power, community citizenship, and employee performance and development motivations with respect to fixed asset turnover.

The significance levels for all four objective motivation variables related to fixed asset turnover were relatively high. The cumulative R^2 for the significant variables was 44.7 percent, suggesting the level of motivation of top management to achieve these objectives may be quite important to the efficient performance of cooperatives. Community citizenship motivation was associated with 14.6 percent of the total variation in fixed asset turnover while competitive power motivation was associated with 13.9 percent. In comparison, employee performance and development motivation contributed 9.7 percent to the R^2 and profitability motivation contributed 6.5 percent.

Assuming a causal relationship running from levels of motivation to performance, the results suggest competitive power, community citizenship and employee performance and development motivations might well be emphasized by the top managers to increase fixed asset turnover. Each of them had fairly high coefficients, were

highly significant, and contributed substantially to the total R^2 .

Evidence of the interrelationships among some of the objective motivations related to fixed asset turnover was given by simple correlations of .450 between employee performance and development motivation and competitive power motivation, -.346 between profitability motivation and community citizenship motivation, and .367 between employee performance and development motivation and community citizenship motivation (Appendix Table E.1). This suggests these pairs of objective motivations might well be considered together in relation to fixed asset turnover, realizing that causing a change in one may well lead to an accompanying change in another.

The negative relationship of competitive power motivation to sales per employee and the positive relationship of competitive power motivation to fixed asset turnover suggests the following possibility. The top manager interested in increasing the market position of the cooperative may add more personnel with the goal of increasing service capacity. Fixed asset investment may remain the same. Therefore, an increase in competitive power motivation would result in a decrease in sales per employee and either an increase or stable situation with fixed asset turnover, particularly in the short run or if the cooperative was almost always pursuing an aggressive growth pattern.

Debt Position

Current Ratio. Top management's innovation motivation was positively related to the current ratio of the cooperatives in the sample while employee performance and development, growth, and efficiency motivations were negatively related to the current ratio (Table 11). Since the coefficients for innovation motivation and employee performance and development motivation were of approximately the same absolute value, although of opposite sign, simultaneous increases of one unit in each would approximately offset each other with respect to the current ratio. Also, a unit increase in employee performance and development motivation is associated with approximately 1.5 times the decrease in the current ratio associated with a unit increase in either growth or efficiency motivation.

All of the objective motivations related to the current ratio were significant at over the 95 percent level, with the exception of efficiency motivation which was significant at the 82 percent level. The four objective motivations related to the current ratio accounted for a substantial 57.8 percent of the variation in the current ratio. Employee performance and development motivation contributed most to the cumulative R^2 value, contributing 2.4 times as much as innovation motivation, 3.3 times as much as growth motivation, and 5.5 times as much as efficiency motivation.

TABLE 11. Relationship Between Top Managements' Levels of Motivation to Achieve Objectives and Debt Position of Cooperatives.

Debt Position Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
				(%)
<u>Current Ratio</u>				
Innovation ^a	2.884	99	+.17	12.9
Employee Performance and Development	2.283	96	-.16	43.2
Growth	2.247	96	-.11	52.3
Efficiency	1.446	82	-.10	57.8
Competitive Power		NS	+	59.7
Community Citizenship		NS	-	60.0
Profitability		NS	+	60.0
<u>Total Debt Ratio</u>				
Profitability ^a	2.858	99	+.005	30.1
Efficiency		NS	-	33.7
Innovation		NS	+	38.5
Employee Performance and Development		NS	-	41.3
Competitive Power		NS	-	42.2
Community Citizenship		NS	+	42.4
Growth		NS	+	42.6

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Current Ratio 2.2
Total Debt Ratio .15

Constant for significant variables: Current Ratio 13.8
Total Debt Ratio .05

It appears top management might well be highly concerned with controlling the level of motivation to achieve the innovation, employee performance and development, and growth objectives and somewhat less concerned with the efficiency objective when considering how to maintain a higher current ratio for a cooperative.

Innovation motivation had a simple correlation of .428 in relation to employee performance and development motivation and efficiency motivation had a simple correlation of .462 in relation to employee performance and development motivation (Appendix Table E.1). It seems that as the top managers were highly motivated to achieve employee performance and development, they also tended to be highly motivated to achieve both innovation and efficiency. Since innovation motivation is positively related to the current ratio, while employee performance and development motivation is negatively related, a delicate problem of balancing the objective motivations presents itself.

Total Debt Ratio. Profitability motivation was the only top management objective motivation variable related to the total debt ratio (Table 11). An increase in profitability motivation of one unit was associated with an increase of .005 in the ratio of total debt to total assets.

Profitability motivation was significant at the 99 percent level and contributed 30.1 percent to the total R^2 , which is relatively high

for a single variable in relation to the results of other regressions run in this study. Although profitability motivation was highly significant, the size of the coefficient is so small a large increase in profitability motivation would be required to generate much change in the total debt ratio.

Profitability

Net Margin. Top managements' competitive power motivation was negatively related to the total net margin of the cooperatives (Table 12). A unit increase in competitive power motivation was associated with a decrease of \$3,020 in net margin of the cooperatives in the sample. Competitive power motivation was significant at the 94 percent level and contributed 17.7 percent to the total R^2 .

The constant for the relationship between competitive power motivation and net margin was \$278,600, which was greater than the net margin of any of the cooperatives in the sample. The highest net margin of any of the sample cooperatives was \$244,000 (Appendix Table A). If competitive power motivation affects actual net margin, these results suggest that any motivation to achieve competitive power could only lead to a lower net margin, unless the direction of causation were in reverse of that assumed in the regression. It is very possible that the level of motivation to achieve competitive power is a function of profits, rather than vice versa.

TABLE 12. Relationship Between Top Managements' Levels of Motivation to Achieve Objectives and Profitability of Cooperatives.

Profitability Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Net Margin</u>				
Competitive Power ^a	2.022	94	-3020	17.7
Community Citizenship		NS	-	21.1
Growth		NS	-	24.8
Efficiency		NS	-	28.1
Profitability		NS	+	28.4
Employee Performance and Development		NS	-	28.5
Innovation		NS	+	28.5
<u>Net Margin as a Percent of Sales</u>			(%)	
Profitability ^a	2.694	98	-.11	18.2
Growth	1.811	91	+.13	26.5
Competitive Power	1.469	83	-.10	32.4
Efficiency	1.354	80	+.12	39.4
Innovation		NS	-	43.0
Employee Performance and Development		NS	+	44.0
Community Citizenship		NS	-	44.1

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Net Margin \$66,000
 Percent Net Margin 2.9
 Constant for significant variables: Net Margin \$278,600
 Percent Net Margin 3.1

Net Margin as a Percent of Sales. Profitability and competitive power motivations of top management were negatively related to net margin as a percent of sales of the cooperatives while growth and efficiency motivations were positively related (Table 12). The coefficients for all of the objective motivations related to net margin on sales were of approximately the same absolute value, although the coefficients for profitability and competitive power motivations were negative while the coefficients for growth and efficiency motivations were positive.

The profitability and growth motivations were relatively more significant, 98 percent and 91 percent respectively, compared to the competitive power and efficiency motivations, 83 percent and 80 percent respectively. The objective motivation which accounted for the highest R^2 value was profitability motivation which contributed 2.2 times as much to the total R^2 as did growth motivation, 2.6 times as much as did efficiency motivation, and 3.1 times as much as did competitive power motivation.

Profitability and growth motivations seemed to be the most relevant top management objective motivations related to net margin as a percent of sales. They had the highest significance levels and contributed the greatest amounts to the variation in net margin as a percent of sales.

The negative relationship between competitive power motivation

and both net margin and net margin as a percent of sales seems, as suggested earlier, to intuitively suggest the level of motivation being based on performance. Top managers perceiving low profitability in their cooperative may see increased competitive power as one means of increasing their profitability.

Key Employees

Size

Sales. The key employees' competitive power and innovation motivations were positively related to sales of the cooperatives while employee performance and development and community citizenship motivations were negatively related (Table 13). In comparison, if we assume the increase in sales associated with a unit increase in competitive power motivation was represented by an index of 1.0, then the change in sales associated with a unit increase in employee performance and development motivation was -1.1, with a unit increase in community citizenship motivation was -.0, and was .6 for a unit increase in innovation motivation.

Although, the regression program brought in four of the objective motivation variables as being related to sales, none of these were highly significant or contributed substantially to the variation in sales. Both competitive power and employee performance and development

TABLE 13. Relationship Between Key Employees' Levels of Motivation to Achieve Objectives and Size of Cooperatives

Size Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$000)	(%)
<u>Sales</u>				
Competitive Power ^a	1.500	85	+248	6.3
Employee Performance and Development	1.475	84	-273	10.3
Community Citizenship	1.249	77	-232	15.5
Innovation	1.206	76	+152	22.5
Profitability		NS	+	23.9
Efficiency		NS	+	25.8
Growth		NS	+	25.8
<u>Total Assets</u>				
Innovation ^a	2.089	95	+116	9.1
Efficiency	1.543	86	+125	19.7
Profitability	1.289	77	+ 63	24.0
Employee Performance and Development	1.255	77	- 96	30.8
Growth		NS	+	31.9
Competitive Power		NS	+	32.5
Community Citizenship		NS	-	34.3

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables:	Sales	\$4,619,000
	Total Assets	\$1,962,000
Constant for significant variables:	Sales	\$5,405,000
	Total Assets	\$1,105,000

motivations were significant at approximately the 75 percent level. The largest contributor to the total R^2 was the innovation motivation with 7.0 percent and the lowest contributor was employee performance and development motivation with 4.0 percent. Thus, competitive power and employee performance and development motivation seemed most closely related to changes in sales.

There was some evidence supporting an interrelationship between competitive power motivation and both community citizenship and innovation motivations. The simple correlation was .433 between competitive power motivation and community citizenship motivation and was .352 between competitive power motivation and innovation motivation (Appendix Table E. 2). This suggests community citizenship and innovation may actually be "power" objectives of the cooperative--means to market leadership. Such an interpretation has interesting aspects in terms of how cooperatives operate. If a cooperative's response to society's plea for it to be more active in the community in a charitable sense is seen by the cooperative as a means of strengthening its market position, the motivation will still be highly competitive rather than benevolent, with possible detrimental side effects for the community. The community interests would not be the determining factor, but rather the means by which the cooperative might exploit community interests for the cooperative's own gain.

Total Assets. Innovation, efficiency, and profitability

motivations of key employees were positively related to total assets of the cooperatives while employee performance and development motivation was negatively related (Table 13). The coefficient for innovation motivation in relation to total assets was \$116,000 and for efficiency motivation was \$125,000. Profitability motivation had a coefficient of \$63,000, about one-half the size of the coefficients for the other two positively related variables. Employee performance and development motivation had a coefficient of -\$96,000 in relation to total assets.

Both innovation and efficiency motivations seemed comparatively more important than either profitability or employee performance and development motivation in their relationship with total assets. Innovation motivation was significant at the 95 percent level and was associated with an R^2 of 9.1 percent. Efficiency motivation was significant at the 86 percent level and was associated with an R^2 of 10.6 percent. In contrast, profitability and employee performance and development motivations were both significant at the 77 percent level and contributed only 4.3 percent and 6.8 percent to the R^2 respectively.

There was a simple correlation of -.435 between innovation and efficiency motivations and a simple correlation of .379 between innovation and employee performance and development motivations (Appendix Table E.2). A dilemma is presented however, when we

consider that both innovation and efficiency motivations are positively related to total assets while the simple correlation between them is a negative value. Also, innovation and employee performance and development motivations are of opposite signs in relation to total assets while the simple correlation between them is a positive value. If these objective motivations, in fact, have an effect on total assets, then it seems a very delicate problem of balance of these objective motivations is presented in relation to the proper levels of motivation needed to maximize total assets.

Two key employees' objective motivations were related to both of the size of the cooperative variables, sales and total assets. Increases in innovation motivation and decreases in employee performance and development motivation were related to increases in the size of the cooperatives.

Rate of Growth

Percent Change in Sales. Growth motivation of the key employees was positively related to the cooperatives' percent change in sales with a .72 coefficient (Table 14). Growth motivation had a relatively low significance level of 78 percent and accounted for an R^2 of 8.1 percent. This leaves over 90 percent of the total variation in the rate of change in sales to be explained by variables other than the key employees' objective motivations evaluated in this study.

TABLE 14. Relationship Between Key Employees' Levels of Motivation to Achieve Objectives and Rate of Growth of Cooperatives

Rate of Growth Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(%)	(%)
<u>Percent Change in Sales</u>				
Growth ^a	1.257	78	+ .72	8.1
Employee Performance and Development		NS	+	12.2
Innovation		NS	-	17.4
Community Citizenship		NS	+	21.2
Competitive Power		NS	-	22.7
Profitability		NS	+	23.0
Efficiency		NS	+	23.1
<u>Percent Change in Total Assets</u>				
Growth ^a	2.046	95	+1.66	7.7
Efficiency	1.700	89	-1.57	16.8
Employee Performance and Development	1.286	78	-1.09	24.6
Community Citizenship		NS	+	27.9
Innovation		NS	-	31.7
Profitability		NS	-	32.0
Competitive Power		NS	+	32.0

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Percent Change in Sales 18.2
 Percent Change in Total Assets 22.5

Constant for significant variables: Percent Change in Sales -19.1
 Percent Change in Total Assets 95.2

Percent Change in Total Assets. Key employees' growth, efficiency, and employee performance and development motivations were associated with the percent change in total assets of the cooperatives (Table 14). A unit increase in growth motivation was associated with an increase in percent change in total assets of 1.66. Since a unit increase in efficiency motivation was related to a decline in percent change in total assets of 1.57, simultaneous increases of the same magnitude in growth and efficiency motivation would approximately offset each other with respect to the percent change in total assets. The coefficient of employee performance and development motivation with respect to the rate of change in total assets was -1.09, so an increase of 1.5 units of employee performance and development motivation compares with approximately the same decline in the rate of change in total assets as a one unit increase in efficiency motivation.

Growth and efficiency motivations were the most significant objective motivations related to rate of change in total assets, having 95 percent and 89 percent significance levels respectively. In comparison, employee performance and development motivation was 78 percent significant. Almost 25 percent of the total variation in percent change in total assets was accounted for by these three objective motivations. Each of the three objective motivations accounted for approximately one-third of this total R^2 .

Growth motivation was positively related to both rate of change in sales and rate of change in total assets. This is consistent with the motivation theory referred to in this study where one would expect the economic performance associated with a growth objective to be actual growth, and for that actual growth rate to be greater, the higher the personnel's level of motivation to achieve it.

Efficiency

Sales Per Employee. There were no key employees' objective motivation variables related to sales per employee of the cooperatives (Table 15). The total variation in sales per employee is apparently accounted for by variables other than the key employees' objective motivations included in this study.

Fixed Asset Turnover. Key employees' efficiency, competitive power, employee performance and development, and community citizenship motivations were positively related to fixed asset turnover of the cooperatives while their profitability motivation was negatively related to fixed asset turnover (Table 15).

Efficiency motivation was associated with the largest positive increase in fixed asset turnover with a coefficient of .17. This is approximately 2.5 times the positive coefficients for either employee performance and development motivation or community citizenship motivation and over eight times the positive coefficient of competitive

TABLE 15. Relationship Between Key Employees' Levels of Motivation to Achieve Objectives and Efficiency of Cooperatives

Efficiency Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Sales per Employee</u>				
Community Citizenship ^a		NS	+	4.6
Employee Performance and Development		NS	+	5.9
Growth		NS	-	8.0
Innovation		NS	-	11.0
Profitability		NS	-	13.1
Efficiency		NS	-	13.8
Competitive Power		NS	+	13.9
<u>Fixed Asset Turnover</u>				
			(times yearly)	
Efficiency ^a	3.354	99	+.17	30.5
Profitability	3.072	99	-.02	48.2
Competitive Power	4.343	99	+.02	58.0
Employee Performance and Development	1.794	91	+.07	62.9
Community Citizenship	1.121	72	+.06	65.8
Innovation		NS	-	66.1
Growth		NS	-	66.2

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Fixed Asset Turnover .98 (times yearly)

Constant for significant variables: Fixed Asset Turnover -10.7 (times yearly)

power motivation. Simultaneous unit increases of profitability and competitive power motivations would cancel each other out and result in no change in fixed asset turnover since the coefficients are $-.02$ and $.02$ respectively.

Efficiency motivation was significant at the 100 percent level by the T-test and accounted for over 30 percent of the variation in fixed asset turnover. This was almost equal to the variation in fixed asset turnover accounted for by the total of the other four significant objective motivations. The cumulative R^2 for all five objective motivations was 65.8 percent which leaves only one-third of the total variation in fixed asset turnover to be explained by other factors.

Profitability and competitive power motivations were also highly significant at the 99 percent and 100 percent levels respectively and contributed an R^2 of 17.7 percent and 9.8 percent respectively. Employee performance and development was significant at the 91 percent level but contributed an R^2 of only 4.9 percent. Community citizenship had a low significance level of 72 percent and contributed only 2.9 percent to the R^2 and so is likely a relatively minor factor in connection with fixed asset turnover.

The constant for the significant variables was -10.7 which underlines the need for motivated key employees, employees who wish to increase the effective use of the organizations' fixed assets. They should apparently be encouraged to stress those objective motivations

with a positive relationship to fixed asset turnover, especially efficiency and competitive position. Efficiency motivation seemed the most important variable with a high significance level, a very high R^2 and a relatively high coefficient in connection with fixed asset turnover.

The last objective motivation variable brought in by the regression analysis, community citizenship, had a relatively high interrelation with efficiency and competitive power motivations. This is signified by a simple correlation of $-.510$ between community citizenship and competitive power motivations (Appendix Table E.2). Therefore, a rise in efficiency motivation was associated with a decline in community citizenship motivation and a rise in competitive power motivation was associated with a rise in community citizenship motivation. The negative relationship between efficiency and community citizenship motivations suggests key employees possibly see community citizenship as a nonproductive investment for the firm, and hence where efficiency is a priority, community citizenship is not. The positive relationship between competitive power and community citizenship motivations, as mentioned earlier, suggests cooperatives may not see community involvement in a benevolent sense but rather as another means of achieving their own improved market position.

Debt Position

Current Ratio. Competitive power motivation of key employees was positively associated with the current ratio of the cooperatives while community citizenship and growth motivations were negatively associated with the current ratio (Table 16). A unit increase in competitive power motivation was associated with a .21 rise in the current ratio. A unit increase in community citizenship motivation was associated with a decline in the current ratio of .25, almost twice the .13 decline in the current ratio associated with a unit increase in growth motivation.

Objective motivation relationships of high significance were competitive power which was significant at the 97 percent level and community citizenship which was significant at the 94 percent level, in contrast to growth which was significant at only the 78 percent level.

Competitive power and community citizenship motivations each contributed more than ten percent to the total R^2 for the regression while growth motivation contributed less than seven percent. The variation in the current ratio accounted for by these three objective motivations was somewhat less than 30 percent.

The negative relationship between growth motivation and the current ratio suggests increased growth motivation is related to increased current liabilities with respect to current assets. This

TABLE 16. Relationship Between Key Employees' Levels of Motivation to Achieve Objectives and Debt Position of Cooperatives

Debt Position Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ² (%)
<u>Current Ratio</u>				
Competitive Power ^a	2,241	97	+.21	10.1
Community Citizenship	1,984	94	-.25	20.4
Growth	1,269	78	-.13	27.3
Efficiency		NS	-	31.4
Employee Performance and Development		NS	-	33.6
Profitability		NS	-	34.2
Innovation		NS	-	34.3
<u>Total Debt Ratio</u>				
Innovation ^a	2,133	95	+.008	13.8
Growth	1,800	91	+.009	27.0
Efficiency		NS	-	27.6
Community Citizenship		NS	-	28.6
Profitability		NS	+	28.9
Employee Performance and Development		NS	+	28.9
Competitive Power		NS	+	28.9

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent)

Standard Deviation for significant variables:	Current Ratio	2.8
	Total Debt Ratio	.17
Constant for significant variables:	Current Ratio	9.0
	Total Debt Ratio	-.51

is consistent with patterns observed in growing cooperatives which tend to run shorter of working capital than do more stable cooperatives.

Community citizenship motivation had a simple correlation of .433 with competitive power motivation and a simple correlation of -.494 with growth motivation (Appendix Table E. 2). Community citizenship and competitive power motivations tended to vary together while community citizenship and growth motivations tended to vary inversely. The positive correlation of community citizenship and competitive power motivations may suggest that dominance is really the objective of community citizenship motivation rather than a non-dominating social responsibility. On the other hand, if a cooperative seeks dominance, it may have to turn to community activities to maintain a favorable image.

Total Debt Ratio. Key employees' innovation and growth motivations were positively related to the total debt ratio of the cooperatives with approximately the same coefficients (Table 16). Both were significant at over 90 percent and each contributed approximately one-half of the 27 percent of the variation in the total debt ratio accounted for by the regression.

The constant was -.51 for the regression. Since innovation and growth motivations were positively associated with the total debt ratio, it appears cooperatives with key employees who are more

highly motivated to grow and innovate finance their activities with a relatively greater proportion of debt to equity.

Profitability

Net Margin. There were no key employee objective motivation variables related to the total net margin of the cooperatives (Table 17). Apparently, all of the variation in the total net margin of the cooperatives is associated with factors other than the key employees' objective motivations, or with objective motivations not studied in this project.

Net Margin as a Percent of Sales. The key employees' competitive power motivation was negatively related to net margin as a percent of sales (Table 17). However, the significance level was only 70 percent and the R^2 contributed by competitive power motivation was only 5.7 percent. An increase in competitive power motivation by one unit was associated with a .10 percent decline in net margin on sales.

Competitive power motivation was only mildly significant and was associated with a small change in net margin as a percent of sales. However, if we assume competitive power motivation affects net margin as a percent of sales, cooperatives who wish to increase net margin as a percent of sales might encourage key employees to deemphasize competitive power. Pursuit of competitive power may

TABLE 17. Relationship Between Key Employees' Levels of Motivation to Achieve Objectives and Profitability of Cooperatives

Profitability Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Net Margin</u>				
Innovation ^a		NS	+	3.1
Community Citizenship		NS	-	7.3
Employee Performance and Development		NS	-	10.0
Competitive Power		NS	+	11.5
Efficiency		NS	-	13.5
Profitability		NS	-	13.7
Growth		NS	-	13.8
<u>Net Margin as a Percent of Sales</u>			(%)	
Competitive Power ^a	1.070	70	-.10	5.7
Innovation		NS	-	8.1
Efficiency		NS	-	12.2
Profitability		NS	+	14.2
Community Citizenship		NS	-	14.6
Growth		NS	-	14.7
Employee Performance and Development		NS	-	14.7

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Percent Net Margin 3.3

Constant for significant variables: Percent Net Margin 11.0

be costly, and/or require cutting price and operating more aggressively on lower margins. On the other hand, the causal effect may be reversed in this case. The negative relationship may be due to cooperatives with low net margins on sales pushing employees, or employees on their own initiative striving, to get margins up by pushing for improved market position. Hence, the lower the net margin on sales of the cooperatives, the more highly motivated key employees may be to seek competitive power.

Board of Directors

Size

Sales. The board of directors' growth, profit, and employee performance and development motivations were negatively related to sales of the cooperatives, while competitive power motivation was positively related to sales (Table 18). A unit increase in growth motivation was associated with a \$566,000 decline in sales. This was approximately twice the decline in sales related to an increase in each of profitability motivation (-\$232,000) and employee performance and development motivation (-\$260,000). The coefficient for competitive power motivation was \$240,000. Therefore, a one unit increase in competitive power motivation would approximately offset the sales change associated with a one unit increase in either

TABLE 18, Relationship Between Board of Directors' Levels of Motivation to Achieve Objectives and Size of Cooperatives

Size Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$000)	(%)
<u>Sales</u>				
Growth ^a	2.806	99	-566	17.4
Profitability	1.577	87	-232	26.0
Employee Performance and Development	1.414	82	-260	30.7
Competitive Power	1.246	77	+240	36.8
Innovation		NS	-	37.9
Community Citizenship		NS	+	37.9
Efficiency		NS	+	37.9
<u>Total Assets</u>				
Growth ^a	2.783	99	-252	15.0
Profitability	1.379	78	- 91	21.2
Employee Performance and Development	1.684	89	-139	27.6
Competitive Power	1.570	86	+135	37.3
Innovation		NS	-	39.1
Efficiency		NS	+	39.7
Community Citizenship		NS	-	39.8

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS = Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Sales \$4,171,000
 Total Assets \$1,868,000

Constant for significant variables: Sales \$37,322,000
 Total Assets \$15,335,000

profitability or employee performance and development motivation, or it would approximately offset the sales change associated with a one-half unit increase in growth motivation.

Growth motivation was highly significant at the 99 percent level and contributed a relatively high 17.4 percent to the total R^2 for the regression. Profitability motivation was significant at the 87 percent level and contributed 8.6 percent to the total R^2 . Employee performance and development and competitive power motivations were both less significant and contributed 4.7 percent and 6.1 percent respectively to the total R^2 . Over one-third of the total variation in sales was accounted for by these four objective motivations of the board of directors.

Total Assets. The board of directors' growth, profitability, and employee performance and development motivations were negatively related to total assets of the cooperatives while competitive power motivation was positively related to total assets (Table 18). Growth motivation was highly significant in relation to total assets (99 percent) and accounted for more of the overall variation in total assets than any of the other objective motivations, with an R^2 of 15.0 percent. Employee performance and development motivation was also highly significant (89 percent), but contributed only 6.4 percent to the total R^2 . These four significant objective motivations related to total assets accounted for over one-third of the total

variation in total assets.

A unit increase in growth motivation of the board of directors was associated with a decrease in total assets of \$252,000, almost twice the decrease in total assets associated with a unit increase in employee performance and development motivation and almost three times the decrease in total assets associated with a unit increase in profitability motivation. A unit increase in competitive power motivation was associated with a \$135,000 increase in total assets of the cooperatives.

The same four board of directors' objective motivations, growth, profitability, employee performance and development, and competitive power, were related to both sales and total assets of the cooperatives. Competitive power was the only objective motivation positively related to these two measures of size of cooperatives.

The relationship between the board of directors' growth motivation and size of the cooperatives was negative, as was the case for the relationship between top managements' growth motivation and size of the cooperatives. And, as in the case of top management, these results may suggest the level of motivation to achieve growth by the board of directors is dependent on the size of the cooperatives, a direction of causation contrary to that assumed in the regression. It should also be noted that absolute size may not be the key, but rather the size in relation to competitors in the market area.

Rate of Growth

Percent Change in Sales. The board of directors' innovation, growth, and employee performance and development motivations were positively associated with the percent change in cooperatives' sales, while their competitive power motivation was negatively associated with the percent change in cooperatives' sales (Table 19). In comparison, if we assume the increase in the rate of change in sales associated with a unit increase in innovation motivation was represented by an index of 1.0, then the change in rate of change in sales associated with a unit increase in growth motivation was .7, with a unit increase in competitive power motivation was -.9, and was .6 for a unit increase in employee performance and development motivation.

Innovation, growth, and competitive power motivations were all significant at the 94 percent level. However, innovation motivation accounted for 1.6 times more contribution to the total R^2 as did competitive power motivation and 2.5 times more contribution as did growth motivation. Employee performance and development motivation was less significant (86 percent level), but contributed approximately the same percent (10 percent) to the R^2 as did competitive power motivation. These results suggest innovation and competitive power motivations are the two board of directors'

TABLE 19. Relationship Between Board of Directors' Levels of Motivation to Achieve Objectives and Rate of Growth of Cooperatives

Rate of Growth Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(%)	(%)
<u>Percent Change in Sales</u>				
Innovation ^a	2.015	94	+2.11	15.5
Growth	2.014	94	+1.53	21.5
Competitive Power	2.084	94	-1.87	31.1
Employee Performance and Development	1.579	86	+1.21	40.9
Profitability		NS	+	44.4
Efficiency		NS	-	44.8
Community Citizenship		NS	-	44.9
<u>Percent Change in Total Assets</u>				
Innovation ^a	2.072	94	+2.76	14.7
Employee Performance and Development	2.653	98	+2.80	24.6
Community Citizenship	1.393	81	-.99	30.1
Competitive Power	1.839	91	-2.07	35.1
Growth	1.762	90	+1.69	47.4
Profitability		NS	-	48.4
Efficiency		NS	-	49.0

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Percent Change in Sales 16.0
 Percent Change in Total Assets 20.0

Constant for significant variables: Percent Change in Sales - 97.0
 Percent Change in Total Assets -147.0

objective motivations most closely related to percent change in cooperatives' sales.

Percent Change in Total Assets. The board of directors' innovation, employee performance and development, and growth motivations were positively related to percent change in total assets of the cooperatives. On the other hand, community citizenship and competitive power motivations were negatively related to percent change in total assets (Table 19). Innovation motivation, with a positive coefficient of 2.76 percent and employee performance and development motivation with a positive coefficient of 2.80 percent were approximately equal with respect to their relationship to rate of change in total assets. A unit increase in growth motivation was related to a 1.69 percent increase in total assets or about 60 percent of the rate of change in total assets associated with a unit increase in either innovation or employee performance and development motivation. An increase in competitive power motivation of one unit was related to a 2.07 percent decline in total assets, whereas a unit increase in community citizenship motivation was related to a .99 percent decline in total assets, or less than one-half of the decline associated with competitive power motivation.

The two most significant variables were innovation motivation (94 percent level) and employee performance and development motivation (98 percent level). Innovation motivation contributed 14.7

percent to the total R^2 and employee performance and development motivation contributed approximately two-thirds that amount, 9.9 percent. Somewhat less significant were competitive power motivation (91 percent level) and growth motivation (90 percent level). Growth motivation contributed 12.3 percent to the total R^2 while employee performance and development motivation contributed only 5.0 percent. Community citizenship motivation, significant at the 81 percent level, was the least significant objective motivation of the board of directors in relation to percent change in total assets, with a contribution of only 5.5 percent to the total R^2 .

The significant objective motivation variables accounted for almost one-half of the total variation in percent change in total assets. The above results indicate the board of directors' objective motivations of innovation, employee performance and development, and growth have the greatest positive association with the cooperatives' rate of growth in total assets.

Innovation, growth, competitive power, and employee performance and development motivation were common objective motivations in relation to both rate of change in sales and rate of change in total assets. The constant for the significant variables related to the percent change in sales was -97 and the constant was -147 for the significant variables related to the percent change in total assets. This suggests strongly the importance of the board of directors

stressing growth, innovation, and employee performance and development, and deemphasizing competitive power if they are to maintain a positive growth rate.

There were indications of interrelationships among some of the board of directors' objective motivations. The simple coefficient was .424 between innovation motivation and competitive power motivation, .396 between growth motivation and competitive power motivation, and .418 between employee performance and development motivation and community citizenship motivation (Appendix Table E.3). Since innovation and competitive power motivations are positively related, yet competitive power motivation is negatively related to the growth rate and innovation motivation is positively related to the growth rate, the board of directors is faced with the dilemma of trying to achieve a balance among the positive and negative relationships. Since the board members are probably unaware of the conflicts between innovation and competitive power motivations, making the conflicts known may facilitate a relatively easy adjustment to minimize or even eliminate the conflicts.

That part of motivation theory which suggests increased motivation will result in increased performance (5, p. 262-265), would seem to support a positive relationship between growth motivation and rate of growth. The positive relationships between rate of growth and both innovation motivation and employee performance and

development motivation also seems intuitively reasonable. However, the results suggesting a negative relationship between rate of growth and competitive power motivation were not expected.

Efficiency

Sales Per Employee. The board of directors' growth motivation was negatively related to annual sales per employee of the cooperatives while employee performance and development motivation was positively related to sales per employee (Table 20). A unit change in growth motivation was associated with a 60 percent greater magnitude of change in sales per employee than was associated with a unit change in employee performance and development motivation.

Growth motivation was highly significant (97 percent level), and accounted for over one-fifth (22.5 percent) of the total variation in sales per employee. Since employee performance and development motivation was significant at the lower level of 85 percent, and accounted for only 8.8 percent of the total variation in sales per employee, growth motivation seems to be the more important of the two variables in explaining variation in sales per employee.

Fixed Asset Turnover. The only board of directors' objective motivations related to fixed asset turnover of the cooperatives were profitability motivation with a coefficient of $-.10$ and growth motivation with a coefficient of $-.07$ (Table 20). Profitability motivation

TABLE 20. Relationship Between Board of Directors' Levels of Motivation to Achieve Objectives and Efficiency of Cooperatives.

Efficiency Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Sales per Employee</u>				
Growth ^a	2.302	97	-3,300	22.5
Employee Performance and Development	1.522	85	+2,100	31.3
Community Citizenship		NS	-	34.4
Competitive Power		NS	+	36.5
Efficiency		NS	-	41.0
Innovation		NS	+	41.4
Profitability		NS	-	41.4
<u>Fixed Asset Turnover</u>			(times yearly)	
Profitability ^a	2.027	94	-, 10	13.9
Growth	1.218	76	-, 07	20.5
Innovation		NS	+	23.2
Efficiency		NS	-	27.5
Employee Performance and Development		NS	+	30.3
Competitive Power		NS	-	32.0
Community Citizenship		NS	+	32.2

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables:	Sales per Employee	\$33,700
	Fixed Asset Turnover	1.4 (times yearly)
Constant for significant variables:	Sales per Employee	\$128,000
	Fixed Asset Turnover	12.0 (times yearly)

seemed the more relevant of the two objective motivations, being significant at the 94 percent level and having a contribution of 13.9 percent to the total R^2 . In comparison, growth motivation was significant at the 76 percent level and contributed only 6.6 percent to the total R^2 .

The constant for the significant objective motivation variables related to fixed asset turnover was 12.0 which was considerably larger than the median fixed asset turnover of 3.6 for the cooperatives in the sample (Appendix Table A). Therefore, since profitability and growth motivations were both negatively related to fixed asset turnover, it would seem, at least on the surface, that the board of directors interested in increasing fixed asset turnover should de-emphasize both profit and growth motivations.

Board of directors' growth motivation was negatively related to both sales per employee and fixed asset turnover. This implies growth and efficiency may be conflicting objectives. However, to the extent a growing cooperative employs and invests in anticipation of growth, one might expect its performance to be indicated by efficiency declining somewhat as a cooperative develops or maintains ability to grow. Investment and personnel numbers may always be just ahead of sales growth.

On the other hand, to the extent the level of motivation to grow is a function of a felt need for growth (small cooperatives), then the

negative relationship might reflect the inefficiency of the cooperative with an inadequate growth record.

Debt Position

Current Ratio. The board of directors' competitive power and profitability motivations were positively associated with the current ratio, while employee performance and development motivation was negatively associated with the current ratio (Table 21). The competitive power motivation coefficient (.33) was almost three times the profitability motivation coefficient (.12). The employee performance and development motivation coefficient was -.20, which means an increase of only .6 units of competitive power motivation would counter-balance a one unit increase in employee performance and development motivation.

The results suggest the objective motivations most closely related to the current ratio are competitive power and employee performance and development. Competitive power motivation was highly significant (99 percent level), and accounted for over one-fifth (22.1 percent) of the total variation in the current ratio. Employee performance and development motivation was significant at the 91 percent level and contributed 13.9 percent to the total R^2 . Profitability motivation was significant at the 81 percent level and contributed only 6.5 percent to the R^2 . The overall variation in the

TABLE 21. Relationship Between Board of Directors' Levels of Motivation to Achieve Objectives and Debt Position of Cooperatives

Debt Position Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ² (%)
<u>Current Ratio</u>				
Competitive Power ^a	3.105	99	+.33	22.1
Employee Performance and Development	1.824	91	-.20	35.1
Profitability	1.372	81	+.12	41.6
Efficiency		NS	+	44.8
Innovation		NS	+	46.4
Growth		NS	-	46.7
Community Citizenship		NS	+	46.8
<u>Total Debt Ratio</u>				
Community Citizenship ^a	2.005	94	-.009	14.8
Profitability	1.671	89	-.010	26.2
Growth		NS	-	29.4
Employee Performance and Development		NS	+	31.6
Innovation		NS	-	32.2
Efficiency		NS	+	32.9
Competitive Power		NS	+	33.1

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS = Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Current Ratio 2.5
Total Debt Ratio .16

Constant for significant variables: Current Ratio -15.5
Total Debt Ratio 1.33

current ratio accounted for by these three objective motivations was over 40 percent leaving less than 60 percent to be explained by other factors.

Total Debt Ratio. Community citizenship and profitability motivations of the board of directors were negatively related to the total debt ratio of the cooperatives (Table 21). Unit increases in each of community citizenship and profitability motivation were associated with approximately the same decline in the total debt ratio, $-.009$ and $-.010$ respectively. They were both significant above 85 percent and contributed similar amounts (14.8 percent and 11.4 percent) to the total R^2 .

The constant for the total debt ratio was 1.33 compared to the largest total debt ratio for any of the cooperatives in the sample of .696 (Appendix Table A). This suggests increased motivation of either community citizenship or profitability by the board of directors will decrease the total debt ratio, or that cooperatives with higher total debt ratios have lower community citizenship and profitability motivations. In addition, decreases in the total debt ratio should be balanced against changes in any of the other performance areas which may result from increases in either community citizenship or profitability motivation.

Profitability

Net Margin. The board of directors' growth and profitability motivations were negatively associated with total net margin of the cooperatives while competitive power motivation was positively associated with net margin (Table 22). A unit increase in growth motivation was associated with a decline in net margin of \$5900, or over twice the \$2850 decline in net margin associated with a unit increase in profitability motivation. In comparison, a unit increase in competitive power motivation was associated with a \$3790 increase in net margin.

Growth motivation, significant at the 91 percent level, was the most significant board of directors' objective motivation related to net margin. In comparison, both competitive power and profitability motivation were significant below the 80 percent level. Competitive power motivation contributed 8.4 percent to the total R^2 , while growth motivation contributed 6.8 percent and profitability motivation contributed 5.4 percent.

Although none of the objective motivations related to net margin were highly significant, the results suggest growth motivation was comparatively more closely associated with net margin.

Net Margin as a Percent of Sales. Employee performance and development, profitability, and growth motivations of the board of

TABLE 22. Relationship Between Board of Directors' Levels of Motivation to Achieve Objectives and Profitability of Cooperatives

Profitability Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Net Margin</u>				
Growth ^a	1.826	91	-5,900	6.8
Competitive Power	1.253	77	+3,790	15.2
Profitability	1.078	70	-2,580	20.6
Efficiency		NS	-	24.2
Community Citizenship		NS	-	24.8
Employee Performance and Development		NS	+	25.4
Innovation		NS	-	25.5
<u>Net Margin as a Percent of Sales</u>			(%)	
Employee Performance and Development ^a	2.646	98	+.30	15.0
Profitability	2.720	99	+.25	31.0
Growth	2.128	94	+.25	45.5
Competitive Power		NS	-	48.9
Efficiency		NS	+	49.8
Innovation		NS	-	51.4
Community Citizenship		NS	-	51.4

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables:	Net Margin	\$69,000
	Percent Net Margin	2.7
Constant for significant variables:	Net Margin	\$222,000
	Percent Net Margin	-34.8

directors had positive relationships with net margin as a percent of sales (Table 22). Unit increases in each of these were associated with approximately equal increases in net margin on sales.

In contrast to the objective motivations related to total net margin, all three objective motivations related to net margin as a percent of sales were significant at over the 90 percent level. Also, each board of directors' objective motivation contributed approximately one-third of the 45.5 percent of the total variation in return on sales accounted for by the regression. Thus, all three objective motivations appeared to be closely associated with net margin as a percent of sales.

There seemed to be no consistency between the objective motivations related to total net margin, as compared to those objective motivations related to net margin as a percent of sales.

Corporate Motivation¹

Size

Sales. The cooperatives' corporate levels of motivation to achieve growth and community citizenship objectives were negatively associated with the total annual sales of the cooperatives

¹ The level of motivation of the three power centers collectively. See p. 53 for further definition.

(Table 23). A unit increase in corporate growth motivation was associated with an \$83,000 decline in sales. A decline in sales of \$69,000 was associated with a unit increase in corporate community citizenship motivation.

Corporate growth motivation was significant at the 83 percent level while corporate community citizenship motivation was significant at the 72 percent level. Each objective motivation contributed approximately one-half of the 13.3 percent of the variation in sales accounted for by the regression. In comparison with community citizenship motivation, growth motivation was both significant at a higher level and was related to a greater decrease in sales.

Total Assets. The corporate levels of motivation to achieve community citizenship and growth objectives were negatively associated with total assets of the cooperatives while the corporate level of motivation to achieve innovation was positively associated with total assets (Table 23). The decline in total assets associated with a one unit increase in community citizenship motivation was 40 percent greater than the decline in total assets associated with a one unit increase in growth motivation. At the same time, the decline in total assets associated with a unit increase in corporate growth motivation and the rise in total assets associated with a unit increase in corporate innovation motivation were of approximately the same magnitude, about \$35,000.

TABLE 23. Relationship Between Corporate Levels of Motivation to Achieve Objectives and Size of Cooperatives

Size Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$000)	(%)
<u>Sales</u>				
Growth ^a	1.427	83	-83	6.0
Community Citizenship	1.234	72	-69	13.3
Innovation		NS	+	15.8
Employee Performance and Development		NS	-	16.9
Profitability		NS	+	18.2
Efficiency		NS	+	18.4
Competitive Power		NS	-	18.6
<u>Total Assets</u>				
Community Citizenship ^a	1.899	93	-49	7.3
Growth	1.394	82	-35	16.3
Innovation	1.143	73	+34	22.3
Employee Performance and Development		NS	-	24.0
Profitability		NS	+	26.5
Efficiency		NS	+	26.5
Competitive Power		NS	-	26.5

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables:	Sales	\$4,608,000
	Total Assets	\$2,017,000
Constant for significant variables:	Sales	\$25,698,000
	Total Assets	\$9,163,000

Both community citizenship motivation, significant at the 93 percent level, and growth motivation, significant at the 82 percent level, were more significant than innovation motivation which was significant at the 73 percent level. Corporate growth motivation contributed relatively more to the total R^2 (9.0 percent) than did either community citizenship motivation (7.3 percent) or innovation motivation, which contributed 6.0 percent. These significance measures suggest corporate community citizenship and growth motivations were the most likely to have an impact on total assets.

The corporate growth and community citizenship motivations were negatively related to both sales and total assets. The negative relationship between corporate growth motivation and the size variables does not follow general motivation theory nor economic theory, both of which suggest that a business would tend to achieve its objectives. This implies the size of the cooperative may, in fact, be dictating the level of motivation to achieve the growth objective rather than vice versa as suggested by the form of the regression model.

The negative relationship between corporate community citizenship motivation and the size variables may suggest the smaller cooperatives were more "locally" oriented and thus felt more of a responsibility to the community while the larger cooperatives were more "customer" oriented. It may also be that the community

citizenship objective as defined in the study was perceived as a "means to growth" in some fashion and is more "growth" than "service."

Rate of Growth

Percent Change in Sales. Corporate employee performance and development and growth motivations were positively related to percent change in sales while corporate competitive power motivation was negatively related to percent change in sales (Table 24). A unit increase in employee performance and development motivation was associated with a rise in rate of change in sales (.89) which was almost three times the rise in rate of change in sales (.33) associated with a unit increase in growth motivation. In addition, an increase in competitive power motivation of one unit was associated with a decline of .40 in rate of change in sales.

Employee performance and development motivation, significant at the 99 percent level, was the most significant corporate objective motivation related to percent change in sales. Corporate growth and competitive power motivations were about equally significant, 91 percent and 88 percent respectively. Corporate employee performance and development motivation contributed approximately two times more to the total R^2 than did growth motivation and approximately two and one-half times more to the total R^2 than did

TABLE 24. Relationship Between Corporate Levels of Motivation to Achieve Objectives and Rate of Growth of Cooperatives

Rate of Growth Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(%)	(%)
<u>Percent Change in Sales</u>				
Employee Performance and Development ^a	3.103	99	+ .89	24.1
Growth	1.825	91	+ .33	36.3
Competitive Power	1.647	88	- .40	45.5
Community Citizenship		NS	+	47.9
Efficiency		NS	+	48.4
Innovation		NS	-	49.2
Profitability		NS	+	49.3
<u>Percent Change in Total Assets</u>				
Growth ^a	1.896	93	+ .51	15.6
Profitability	1.077	70	- .20	21.0
Competitive Power		NS	-	23.9
Employee Performance and Development		NS	+	33.3
Community Citizenship		NS	+	33.6
Innovation		NS	-	33.7
Efficiency		NS	+	33.7

- a Listed in the order of entry in the stepwise regression.
- b Values after all significant variables have entered the regression.
- c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Percent Change in Sales 14.9
 Percent Change in Total Assets 22.3

Constant for significant variables: Percent Change in Sales -82.5
 Percent Change in Total Assets -20.5

competitive power motivation. These three corporate objective motivations accounted for 45.5 percent of the total variation in the cooperatives' percent change in sales, leaving only a little over one-half of the variation to be explained by other factors.

The simple correlation between employee performance and development motivation and competitive power motivation was .445 indicating some interrelationship between these two corporate objective motivations and suggesting the need to consider them jointly (Appendix Table E.4).

The constant for the regression relating these corporate objective motivations to the percent change in sales was a negative value, indicating that with a zero level of motivation to achieve these objectives, (growth, competitive power, and employee performance and development), a cooperative would likely have declining sales. The results further suggest that increases in a cooperatives' rate of growth are likely associated with increases in the cooperatives' corporate levels of motivation to achieve employee performance and development and growth.

Percent Change in Total Assets. The cooperatives' corporate levels of motivation to achieve growth and profitability were related to the cooperatives' percent change in total assets, with only growth motivation being positively related (Table 24). The coefficient in relation to rate of change of total assets was .51 for growth

motivation and was -.20 for profitability motivation.

Corporate growth motivation was relatively more significant (93 percent) than corporate profitability motivation (70 percent). In addition, growth motivation contributed almost three times more to the cumulative R^2 of 21.0 percent than did profitability motivation.

Again, as with percent change in sales, the constant for the regression relating cooperatives' corporate objective motivations to percent change in total assets was a negative value. This suggests that cooperatives with a zero corporate level of motivation to achieve each of the growth and profitability objectives would likely have declining assets. The evidence seems fairly consistent that there is a fairly strong positive relationship between cooperatives' overall levels of motivation to grow and the rate at which cooperatives actually do grow.

Efficiency

Sales Per Employee. Corporate growth and innovation motivations were negatively related to the cooperatives' sales per employee (Table 25). A unit increase in corporate growth motivation was associated with a \$870 decline in sales per employee. A \$650 decline in sales per employee was associated with a unit increase in corporate innovation motivation.

Growth motivation was more significant than innovation

TABLE 25. Relationship Between Corporate Levels of Motivation to Achieve Objectives and Efficiency of Cooperatives

Efficiency Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Sales per Employee</u>				
Growth ^a	2.004	94	+870	15.2
Innovation	1.298	79	-650	22.4
Employee Performance and Development		NS		27.2
Community Citizenship		NS		29.8
Competitive Power		NS		31.6
Efficiency		NS		32.3
Profitability		NS		32.4
			(times yearly)	
<u>Fixed Asset Turnover</u>				
Profitability ^a	2.803	99	-.03	15.9
Efficiency	1.384	81	+.04	30.1
Competitive Power	1.371	81	+.03	34.2
Community Citizenship	1.242	77	-.02	40.0
Employee Performance and Development		NS	+	46.8
Innovation		NS	-	47.3
Growth		NS	+	47.3

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Sales per Employee \$35,900
 Fixed Asset Turnover 1.3 (times yearly)

Constant for significant variables: Sales per Employee \$302,000
 Fixed Asset Turnover -.45 (times yearly)

motivation, 94 and 79 percent respectively, and contributed over twice as much to the total R^2 as did innovation motivation. Thus, growth motivation seemed to be the corporate objective motivation variable most closely related to the cooperatives' sales per employee.

The constant was \$302,000 for the regression relationship between corporate growth and innovation motivations and cooperatives' sales per employee. The highest actual sales per employee associated with any of the cooperatives in the sample was \$211,000 (Appendix Table A). Therefore, judging from the above information, both corporate growth and innovation motivations might well be deemphasized by the cooperatives interested in increasing sales per employee.

Fixed Asset Turnover. The corporate levels of motivation to achieve profitability and community citizenship were negatively related to the cooperatives' fixed asset turnover while the corporate levels of motivation to achieve efficiency and competitive power were positively related to fixed asset turnover (Table 25). The coefficients in relation to fixed asset turnover for the objective motivations were of approximately the same absolute magnitude with a coefficient of .04 for efficiency motivation, .03 for competitive power motivation, -.02 for community citizenship motivation, and -.03 for profitability motivation.

The most significant corporate objective motivation in relation to fixed asset turnover was profitability motivation, significant at the

99 percent level. The remaining objective motivations were significant at lower significance levels with both efficiency and competitive power motivations significant at the 81 percent level and community citizenship motivation significant at the 77 percent level. Profitability and efficiency motivations were approximately equal in their contribution to the total R^2 , each contributing about 15 percent. Competitive power and community citizenship motivations contributed 4.1 percent and 5.8 percent respectively to the total R^2 . Profitability motivation and efficiency motivation seemed to be the most closely associated corporate objective motivations in relation to the cooperatives' fixed asset turnover.

Corporate efficiency and competitive power motivations had a simple correlation of .424 which indicates a certain amount of interrelationship between these two variables (Appendix Table E.4). Cooperatives who had high efficiency motivation tended to also have high competitive power motivation.

The positive relationship between corporate efficiency motivation and fixed asset turnover agreed with the general motivation theory referred to in this study. This suggests increased efficiency motivation by the cooperative will indeed increase the efficiency of the cooperative, to the extent that fixed asset turnover is a measure of efficiency.

Debt Position

Current Ratio. Corporate innovation and competitive power motivations were positively related to the current ratio of the co-operatives while corporate employee performance and development motivation was negatively related to the current ratio (Table 26). Unit increases in innovation and competitive power motivations were related to approximately the same increases in the current ratio, .09 and .07 respectively. A unit increase in employee performance and development motivation was associated with a .12 decline in the current ratio which was a one-third greater absolute change in the current ratio than was associated with innovation motivation.

All of the corporate objective motivations related to the current ratio were highly significant, with all over the 90 percent significance level. Also, each of them contributed large values to the total R^2 . Innovation motivation contributed 17.3 percent to the total R^2 , employee performance and development motivation contributed 18.1 percent, and competitive power motivation contributed 10.6 percent. The resulting total variation in the current ratio accounted for by the regression was 46 percent leaving only a little over one-half of the variation in the current ratio to be explained by other factors.

The three corporate objective motivations related to the current ratio had relatively high simple correlation coefficients with respect

TABLE 26. Relationship Between Corporate Levels of Motivation to Achieve Objectives and Debt Position of Cooperatives

Debt Position Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ² (%)
<u>Current Ratio</u>				
Innovation ^a	2.327	97	+.09	17.3
Employee Performance and Development	2.888	99	-.12	35.4
Competitive Power	1.820	91	+.07	46.0
Growth		NS	-	47.5
Efficiency		NS	-	48.9
Community Citizenship		NS	-	52.2
Profitability		NS	-	53.5
<u>Total Debt Ratio</u>				
Profitability ^a	1.405	82	+.002	10.7
Growth	1.225	74	+.003	16.4
Innovation	1.083	70	+.003	21.8
Community Citizenship		NS	-	28.6
Competitive Power		NS	-	29.3
Employee Performance and Development		NS	+	29.8
Efficiency		NS	-	30.3

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Current Ratio 2.4
 Total Debt Ratio .17

Constant for significant variables: Current Ratio -6.4
 Total Debt Ratio - .74

to each other. Innovation and employee performance and development motivations had a simple correlation of .330, innovation and competitive power motivations .394, and .445 for competitive power and employee performance and development motivations (Appendix Table E.4). This suggests that no one of these objective motivations can be discussed in terms of its relationship with the current ratio without taking into account the relationship of the other objective motivations to the current ratio as well.

Total Debt Ratio. The corporate levels of motivation to achieve profitability, growth, and innovation were positively related to the total debt ratio (Table 26). They were all related to approximately the same magnitude of change in the total debt ratio. Unit increases in either growth or innovation motivation were associated with a rise in the total debt ratio of .003. A unit increase in profitability motivation was associated with a rise in the total debt ratio of .002.

Profitability motivation was the most significant corporate objective motivation related to the total debt ratio, being significant at the 82 percent level. Both growth and innovation motivations were significant at less than the 75 percent significance level. Corporate profitability motivation contributed approximately twice the amount to the total R^2 as did either growth or innovation motivations. Thus, profitability motivation seemed to be the corporate objective motivation most likely to have an impact on the cooperatives' total

debt ratio.

The positive relationship between each of profitability, growth, and innovation motivations and the total debt ratio was intuitively reasonable. Increased debt may well be undertaken to finance the achievement of each of these objectives.

Profitability

Net Margin. A unit increase in corporate community citizenship motivation was related to a decline of \$950 in total net margin of the cooperatives (Table 27). However, the significance level of community citizenship motivation was only 74 percent and the contribution to the total R^2 was only 6.6 percent. Community citizenship motivation was the only corporate objective motivation found related to net margin. Yet, it is apparently only a marginally important factor in relation to cooperatives' net margin, judging from the low significance level, small coefficient, and small contribution to the total R^2 .

Net Margin as a Percent of Sales. The cooperatives' corporate levels of motivation to achieve competitive power and employee performance and development were related to net margin as a percent of sales with competitive power motivation being negatively related and employee performance and development motivation being positively related (Table 27). The absolute magnitude of change in net margin

TABLE 27. Relationship Between Corporate Levels of Motivation to Achieve Objectives and Profitability of Cooperatives

Profitability Variables	T Value ^b	Significance Levels ^c	Coefficient and Sign ^b	Cumulative R ²
			(\$)	(%)
<u>Net Margin</u>				
Community Citizenship ^a	1,157	74	-950	6.6
Growth		NS	-	11.7
Efficiency		NS	-	16.7
Innovation		NS	+	18.9
Employee Performance and Development		NS	+	20.5
Profitability		NS	-	21.2
Competitive Power		NS	-	21.4
<u>Net Margin as a Percent of Sales</u>			(%)	
Competitive Power ^a	1,732	90	-.07	8.2
Employee Performance and Development	1,232	77	+.08	15.4
Innovation		NS	-	18.4
Profitability		NS	-	20.7
Efficiency		NS	+	21.4
Growth		NS	+	22.6
Community Citizenship		NS	+	23.3

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

Standard Deviation for significant variables: Net Margin \$70,000
 Percent Net Margin 3.2

Constant for significant variables: Net Margin \$226,000
 Percent Net Margin 10.9

on sales associated with either of these was approximately the same, .08 for employee performance and development motivation and -.07 for competitive power motivation. Competitive power motivation was more significant (90 percent) in comparison with employee performance and development motivation (77 percent). Each corporate objective motivation contributed approximately one-half to the cumulative R^2 of 15.4 percent accounted for by the regression.

As was found for the corporate objective motivations related to the rate of change in sales, the simple correlation was .445 between corporate competitive power motivation and corporate employee performance and development motivation (Appendix Table E.4).

Therefore, at least to a certain extent, these two corporate objective motivations apparently must be considered together when evaluating their relationships with net margin as a percent of sales.

Relationship Between Each Economic Performance Area and Significant Objective Motivation Variables

A knowledge of the relationships between the significant objective motivations and the economic performance areas should aid the decision-maker in improving the economic performance of the cooperative assuming he can make adjustments in the objective motivations. To gain further insight into these relationships, the individual power centers' significant objective motivations with respect to each

economic performance area were examined in a search for some consistency of relationships among the power centers. Also, the corporate power centers' collective significant objective motivations with respect to each economic performance area were examined in a search for consistency of relationships between the corporate and individual power centers. Because the purpose of this section is to determine any consistent relationships between objective motivations and economic performance variables, only those relationships which appeared in two or more individual power centers with respect to any one economic performance variable and were of the same sign are discussed.

The corporate and individual power centers' significant objective motivations related to the economic performance variables are shown in Table 28.

Size

Growth motivation had consistent relationships with both sales and total assets of the cooperatives. This objective motivation was negatively related to both size measures of the sample cooperatives for top management, board of directors, and for the power centers collectively (corporate), and was reasonably significant in all cases. For top management, growth motivation was significant at the 79

TABLE 28. Corporate and Individual Power Centers' Significant Objective Motivation Variables Related to Economic Performance^a

Economic Performance Variables	Top Management			Key Employees			Board of Directors			Corporate		
	Objective Motivation	Significance Level	Coefficient Sign	Objective Motivation	Significance Level	Coefficient Sign	Objective Motivation	Significance Level	Coefficient Sign	Objective Motivation	Significance Level	Coefficient Sign
<u>Size</u>												
<u>Sales</u>	Com. Pow.	85	-	Com. Pow.	85	+	Com. Pow.	77	+			
	Growth	79	-				Growth	99	-	Growth	83	-
	Profit.	82	+				Profit.	87	-			
				Emp. P. & D.	84	-	Emp. P. & D.	82	-			
				Com. Cit.	77	-				Com. Cit.	72	-
				Innov.	76	+						
<u>Total Assets</u>	Com. Pow.	84	-				Com. Pow.	86	+			
	Profit.	87	+	Profit.	77	+	Profit.	78	-			
	Growth	79	-				Growth	99	-	Growth	82	-
				Innov.	95	+				Innov.	73	+
				Eff.	86	+						
				Emp. P. & D.	77	-	Emp. P. & D.	89	-			
										Com. Cit.	93	-
<u>Rate of Growth</u>												
<u>Percent Change in Sales</u>												
	Emp. P. & D.	99	+				Emp. P. & D.	86	+	Emp. P. & D.	99	+
	Growth	95	+	Growth	78	+	Growth	94	+	Growth	91	+
	Com. Pow.	74	-				Com. Pow.	94	-	Com. Pow.	88	-
							Innov.	94	+			
<u>Percent Change in Total Assets</u>												
	Growth	97	+	Growth	95	+	Growth	90	+	Growth	93	+
	Profit.	75	-							Profit.	70	-
	Com. Pow.	91	-				Com. Pow.	91	-			
	Emp. P. & D.	87	+	Emp. P. & D.	78	-	Emp. P. & D.	98	+			
				Eff.	89	-						
							Innov.	94	+			
							Com. Cit.	81	-			
<u>Efficiency</u>												
<u>Sales per Employee</u>												
	Innov.	88	-							Innov.	79	-
	Growth	77	-				Growth	97	-	Growth	94	-
	Eff.	82	+									
	Com. Pow.	78	-									
							Emp. P. & D.	81	+			

TABLE 28. Continued.

Economic Performance Variables	Top Management			Key Employees			Board of Directors			Corporate		
	Objective Motivation	Significance Level	Coefficient Sign	Objective Motivation	Significance Level	Coefficient Sign	Objective Motivation	Significance Level	Coefficient Sign	Objective Motivation	Significance Level	Coefficient Sign
<u>Efficiency</u>												
<u>Fixed Asset Turnover</u>	Com. Pow.	93	+	Com. Pow.	99	+				Com. Pow.	81	+
	Profit.	96	-	Profit.	99	-	Profit.	99	-	Profit.	99	-
	Com. Cit.	97	-	Com. Cit.	72	+				Com. Cit.	77	-
	Emp. P. & D.	89	+	Emp. P. & D.	91	+				Eff.	81	+
				Eff.	99	+	Growth	76	-			
<u>Debt Position</u>												
<u>Current Ratio</u>	Innov.	99	+							Innov.	97	+
	Emp. P. & D.	96	-				Emp. P. & D.	91	-	Emp. P. & D.	99	-
	Growth	96	-	Growth	78	-						
	Eff.	82	-	Com. Pow.	97	+	Com. Pow.	99	+	Com. Pow.	91	+
				Com. Cit.	94	-	Profit.	81	+			
<u>Total Debt Ratio</u>	Profit.	99	+				Profit.	89	+	Profit.	82	+
				Innov.	95	+				Innov.	70	+
				Growth	91	+				Growth	74	+
							Com. Cit.	94	-			
<u>Profitability</u>												
<u>Net Margin</u>	Com. Pow.	94	-				Com. Pow.	77	+			
							Growth	91	-			
							Profit.	70	-	Com. Cit.	74	-
<u>Net Margin as a Percent of Sales</u>	Profit.	98	-				Profit.	99	+			
	Growth	91	+				Growth	94	+			
	Com. Pow.	83	-	Com. Pow.	70	-				Com. Pow.	90	-
	Eff.	80	+				Emp. P. & D.	98	+	Emp. P. & D.	77	+

a The following abbreviations were used in this table:

- Innov. - Innovation
- Profit. - Profitability
- Emp. P. & D. - Employee Performance & Development
- Eff. - Efficiency
- Com. Cit. - Community Citizenship
- Com. Pow. - Competitive Power
- Growth - Growth

percent level for both size measures, for the board of directors it was significant at the 99 percent level for both size measures, and for the power centers collectively it was significant at over the 80 percent level for both size measures. Since the relationships were negative, the suggestion was made in the relevant preceding sections that the size of the cooperatives might, in fact, be affecting the level of growth motivation, rather than vice versa. Once the felt need for growth is satisfied by achieving a relatively large size, the level of motivation to grow apparently diminishes.

Employee performance and development motivation was negatively related to both size measures within the key employees' and board of directors' power centers. The significance levels of employee performance and development motivations were somewhat lower than those associated with growth motivation. Employee performance and development motivation was below the 85 percent level in the key employees for both size measures and below the 90 percent level in the board of directors for both size measures.

Rate of Growth

Growth motivation was positively related to percent change in both sales and total assets for all of the individual power centers and the power centers collectively (corporate). The relationship between key employees' growth motivation and the rate of change in sales,

was the only case where the significance level was below 90 percent. This was the most significant and consistent relationship found between objective motivations and economic performance. The evidence seems quite clear--if a cooperative is highly motivated to grow, it will grow; and if growth is desired but the motivation to achieve growth is low, chances of achieving growth are very low.

Competitive power motivation was negatively related to both rate of growth measures in top management and the board of directors' power centers and negatively related to rate of change in sales for power centers collectively. Again the significance levels were relatively high, being around 90 percent significant for all cases with the exception of the relationship with rate of change in sales for top management.

Employee performance and development motivation was positively related to both rate of growth measures for the top management and board of directors' power centers and positively related to rate of change in sales for the power centers collectively. In all cases employee performance and development motivation was over 85 percent significant. In contrast, however, employee performance and development motivation entered the regression analysis with a negative relationship to rate of change in total assets for the key employees power center. Since the significance level was only 78 percent for this relationship, and since employee performance and development

motivation was positively related with rate of growth in all other cases, it does not seem that the key employees' employee performance and development motivation influences rate of growth materially and that this negative relationship might well be overlooked.

Efficiency

Growth motivation was negatively related to sales per employee for top management, the board of directors, and the power centers collectively (corporate). It was generally significant at about 95 percent with the exception of the relationship for top management which was significant at 77 percent.

It appears higher growth motivation generates a more rapid rate of growth, but that a consequence may well be a decline in certain efficiency measures. This suggests a cooperative should carefully watch its performance, if it seeks growth by increased growth motivation, to assure that inefficiency does not eat up the gains from growth.

Profitability motivation was negatively related to fixed asset turnover for all the individual power centers and the power centers collectively. The lowest significance level for this relationship was 94 percent.

Competitive power motivation was positively related to fixed asset turnover for top management, key employees, and power

centers collectively. The significance levels varied from a low of 83 percent to a high of 100 percent.

Employee performance and development motivation was positively related to fixed asset turnover for top management and key employees. In both cases, the significance level was around 90 percent.

Debt Position

Employee performance and development motivation was negatively associated with the current ratio for top management, the board of directors, and the power centers collectively (corporate). In all cases, the significance levels were over 90 percent.

Competitive power motivation was positively related to the current ratio for key employees, the board of directors, and overall power centers collectively. Again, in all cases, the significance levels were over 90 percent.

Growth motivation was negatively related to the current ratio for top management and key employees and positively related to the total debt ratio for key employees and power centers collectively. In these cases, increases in growth motivation were associated with decreases in current assets in relation to current liabilities and increases in total debt in relation to total assets. The significance levels of growth motivation varied greatly from a high of 96 percent

to a low of 78 percent with respect to the current ratio and from a high of 91 percent to a low of 74 percent with respect to the total debt ratio.

Profitability

Growth motivation was positively related to net margin as a percent of sales for top management and the board of directors with the significance level over 90 percent in both cases. In addition, growth motivation was negatively related to total net margin for the board of directors with a significance level of 91 percent.

Competitive power motivation was negatively related to net margin as a percent of sales for top management, key employees, and power centers collectively (corporate). The significance levels were relatively low at the 83 percent level and the 70 percent level for the individual power centers. However, the significance was at the 90 percent level for the power centers collectively. Competitive power motivation was also negatively associated with the total net margin for top management with a significance level of 95 percent. On the other hand, competitive power motivation was positively related to the total net margin for the board of directors. The significance level for this relationship was a relatively low 77 percent.

Comparison Among Power Centers Concerning Their
Relationships with Cooperatives'
Economic Performance

In evaluating the relationships between objective motivations and cooperatives' economic performance, attention was given to determining which power centers' objective motivations as a group seemed to have the closest relationship with cooperatives' economic performance. No one of the power centers' levels of motivation seemed to stand out overall as being most closely related to cooperatives' economic performance. However, upon inspection of the percent of error accounted for (R^2) by the levels of motivation within each power center (Table 29), both top managements' and board of directors' objective motivations seemed to be somewhat more closely related to economic performance of the cooperatives than did key employees' objective motivations. This suggests both of these power centers were more closely aligned with the direction of the cooperative than were the key employees.

Closer examination suggests top managements' objective motivations may be more closely associated with debt position, rate of growth in sales, and profitability than are the board of directors' objective motivations. On the other hand, the board of directors' objective motivations appear more closely associated with the rate of growth of total assets (possibly through control over investment

TABLE 29. The R^2 Values for the Significant Objective Motivation Variables of Each Power Center

	Top Management	Key Employees	Board of Directors
<u>Size</u>			
Sales	20.0	22.5	36.8
Total Assets	21.3	30.8	37.3
<u>Rate of Growth</u>			
Percent Change in Sales	43.9	8.1	40.9
Percent Change in Total Assets	40.4	24.6	47.4
<u>Efficiency</u>			
Sales per Employee	17.7	0.0	20.6
Fixed Asset Turnover	39.4	5.7	45.5
<u>Debt Position</u>			
Current Ratio	36.2	0.0	31.3
Total Debt Ratio	44.7	65.8	20.5
<u>Profitability</u>			
Net Margin	58.7	27.3	41.6
Net Margin as a Percent of Sales	30.1	27.0	26.2
Average	35.2	21.1	34.8

and revolving capital procedures), size (closely related to growth of total assets), and the cooperatives' efficiency.

VII. RELATIONSHIP BETWEEN CONFORMITY OF MOTIVATION LEVELS WITHIN AND AMONG POWER CENTERS AND ECONOMIC PERFORMANCE

Conformity of motivation was measured among the individuals within the key employees power center, among the individuals within the board of directors' power center, and among the three power centers. These three conformity measures were compared with the economic performance of the cooperatives.

As in the section analyzing the relationships between objective motivations and economic performance, the relationships significant at or above the 70 percent level were considered significant and were included in Tables 30, 31, and 32. However, there was no literature review done in the conformity area and it was considered more of an exploratory analysis for this particular study. Consequently, only those relationships which were significant at or above the 80 percent level were discussed in the text with occasional exceptions which seem of special interest. For these same reasons, the discussions in the text were of a more general nature than in the objective motivations section, with an emphasis on trends and tendencies rather than specific relationships.

It is important to remember for the conformity section that a zero value for the conformity index represents homogeneous levels of motivation among the individuals within a power center or among

TABLE 30. Relationship Between Conformity of Motivation Levels Within the Key Employees Power Center and Economic Performance of Cooperatives

Economic Performance Variables	Significant Objective Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
<u>Size</u>			(%)	(%)	(%)
<u>Sales</u>	Profitability	2.307	96	+638,000	19.0
	Community Citizenship	1.102	71	-389,000	24.2
<u>Total Assets</u>	Profitability	2.396	97	+213,000	23.2
<u>Rate of Growth</u>					
<u>Percent Change in Sales</u>				(%)	
	Competitive Power	1.766	91	-2.93	22.1
	Community Citizenship	1.575	87	-2.17	27.1
	Growth	1.256	77	+2.79	33.7
<u>Percent Change in Total Assets</u>					
	Efficiency	1.899	93	+1.96	10.2
	Innovation	1.258	78	-.278	17.8
<u>Efficiency</u>					
<u>Sales per Employee</u>				(\$)	
	Efficiency	3.471	99	- 8,100	12.9
	Profitability	1.982	93	+ 4,400	30.7
	Community Citizenship	1.770	88	+ 5,700	35.6
	Innovation	2.339	97	- 7,200	47.5
	Growth	1.646	88	+ 7,700	50.6
	Competitive Power	1.314	79	+ 4,200	56.0
<u>Fixed Asset Turnover</u>				(times yearly)	
	Efficiency	1.392	82	-.13	8.5
	Profitability	1.986	94	+.17	17.0
	Growth	1.555	86	-.16	27.3

TABLE 30. Continued.

Economic Performance Variables	Significant Object Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
<u>Debt Position</u>			(%)		(%)
<u>Current Ratio</u>	None				
<u>Total Debt Ratio</u>	Competitive Power	2.946	99	+.02	31.4
<u>Profitability</u>				(\$)	
<u>Net Margin</u>	Profitability	2.768	99	+ 9,700	19.2
	Efficiency	1.666	89	- 6,700	29.9
<u>Net Margin as a Percent of Sales</u>	Efficiency	2.344	97	(%) -.38	22.4

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

d A positive coefficient indicates a negative relationship between level of conformity and performance, and vice versa for a negative coefficient; i. e., the sign of the coefficients indicates relationships between "nonconformity" of motivation levels and performance.

Standard Deviation for significant variables:

Sales	- \$4,309,000
Total Assets	- \$1,897,000
Percent Change in Sales	- 16.4
Percent Change in Total Assets	- 22.8
Sales per Employee	- \$30,600
Fixed Asset Turnover	- 1.34
Total Debt Ratio	- .15
Net Margin	- \$62,500
Net Margin as a Percent of Sales	- 3.0

Constant for significant variables:

Sales	- \$537,000
Total Assets	- -\$70,000
Percent Change in Sales	- 26.5
Percent Change in Total Assets	- 22.1
Sales per Employee	- \$81,700
Fixed Asset Turnover	- 4.22
Total Debt Ratio	- .23
Net Margin	- \$40,100
Net Margin as a Percent of Sales	- 6.3

TABLE 31. Relationship Between Conformity of Motivation Levels Within the Board of Directors' Power Center and Economic Performance of Cooperatives

Economic Performance Variables	Significant Objectives Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
			(%)	(\$)	(%)
<u>Size</u>					
<u>Sales</u>	Innovation	1.784	91	+623,000	14.9
	Profitability	1.325	80	+239,000	22.8
	Efficiency	1.788	91	+721,000	30.0
	Growth	1.567	86	-392,000	39.3
<u>Total Assets</u>	Profitability	1.718	90	+139,000	16.3
	Innovation	1.646	88	+259,000	26.5
	Efficiency	1.745	90	+316,000	34.7
	Growth	1.125	72	-126,000	39.5
<u>Rate of Growth</u>					
<u>Percent Change in Sales</u>				(%)	
	Competitive Power	2.487	98	-3.33	27.1
	Efficiency	1.571	86	-2.32	36.4
	Profitability	1.211	76	-.84	41.7
<u>Percent Change in Total Assets</u>					
	Efficiency	1.184	75	+2.63	7.8
	Competitive Power	1.148	73	-2.26	14.5

TABLE 31. Continued.

Economic Performance Variables	Significant Objective Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
			(%)	(\$)	(%)
<u>Efficiency</u>					
<u>Sales per Employee</u>	Growth	2.074	95	- 4,600	14.2
	Efficiency	1.195	75	+ 4,300	20.5
				(times yearly)	
<u>Fixed Asset Turnover</u>	Profitability	1.286	79	- .08	8.0
<u>Debt Position</u>					
<u>Current Ratio</u>	Growth	1.561	86	+ .30	6.4
	Employee Performance and Development	1.198	75	+ .39	13.3
<u>Total Debt Ratio</u>	Profitability	2.638	98	+ .02	34.5
	Community Citizenship	2.312	97	+ .02	40.1
	Competitive Power	2.305	97	+ .04	51.7
	Innovation	1.141	73	- .02	55.3

TABLE 31. Continued.

Economic Performance Variables	Significant Object Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
			(%)		(%)
<u>Profitability</u>					
<u>Net Margin</u>	Efficiency	2.272	96	+ 13,600	21.6
	Profitability	1.175	75	+ 3,300	27.2
				(%)	
<u>Net Margin as a Percent of Sales</u>	Competitive Power	2.426	97	- .77	17.4
	Growth	1.877	92	+ .31	32.2
	Innovation	1.195	75	+ .39	37.3

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

d A positive coefficient indicates a negative relationship between level of conformity and performance, and vice versa for a negative coefficient; i.e., the sign of the coefficients indicates relationships between "nonconformity" of motivation levels and performance.

Standard Deviation for significant variables:

Sales	- \$4,091,000
Total Assets	- \$1,835,000
Percent Change in Sales	- 15.5
Percent Change in Total Assets	- 23.2
Sales per Employee	- \$36,300
Fixed Asset Turnover	- 1.43
Current Ratio	- 2.98
Total Debt Ratio	- .13
Net Margin	- \$63,800
Net Margin as a Percent of Sales	- 2.9

Constant for significant variables:

Sales	- \$5,091,000
Total Assets	- \$2,657,000
Percent Change in Sales	- 58.9
Percent Change in Total Assets	- 11.7
Sales per Employee	- \$90,300
Fixed Asset Turnover	- 4.53
Current Ratio	- -1.26
Total Debt Ratio	- -.09
Net Margin	- -\$58,500
Net Margin as a Percent of Sales	- 3.4

TABLE 32. Relationship Between Conformity of Motivation Among Power Centers and Economic Performance of Cooperatives

Economic Performance Variables	Significant Objective Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
			(%)		(%)
<u>Size</u>				(\$)	
<u>Sales</u>	Competitive Power	1.908	93	+206,000	7.1
	Growth	1.707	90	-145,000	20.0
<u>Total Assets</u>	None				
<u>Rate of Growth</u>				(%)	
<u>Percent Change in Sales</u>	Growth	3.189	99	+ .91	23.8
	Competitive Power	2.101	95	- .76	39.3
	Efficiency	1.509	85	+ .41	46.8
<u>Percent Change in Total Assets</u>	Growth	2.960	99	+1.07	22.7
	Profitability	2.254	96	- .48	41.7
	Competitive Power	1.292	78	- .60	47.3

TABLE 32. Continued.

Economic Performance Variables	Significant Objective Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
			(%)		(%)
<u>Efficiency</u>					
				(\$)	
<u>Sales per Employee</u>	Profitability	1.366	81	- 600	5.9
	Community Citizenship	2.107	95	+ 1,700	11.5
	Growth	1.771	90	- 1,300	27.7
	Competitive Power	1.103	71	- 800	32.8
<u>Fixed Asset Turnover</u>				(times yearly)	
	Competitive Power	2.079	95	+ .05	24.9
	Innovation	1.811	91	+ .03	36.5
<u>Debt Position</u>					
<u>Current Ratio</u>	Employee Performance and Development	4.807	99	+ .20	37.6
	Innovation	3.813	99	- .14	45.7
	Efficiency	3.428	99	+ .16	57.4
	Competitive Power	2.318	97	+ .12	61.2
	Community Citizenship	2.306	96	- .10	71.3
<u>Total Debt Ratio</u>	Profitability	1.262	76	+ .003	7.7

TABLE 32. Continued.

Economic Performance Variables	Significant Objective Conformities ^a	T Value ^b	Significance Levels ^c	Coefficient and Sign ^d	Cumulative R ²
			(%)		(%)
<u>Profitability</u>					
<u>Net Margin</u>	Profitability	2.064	95	(\$) - 1,500	18.3
<u>Net Margin as a Percent of Sales</u>	Profitability	1.244	77	(%) - .05	7.3
	Efficiency	1.175	75	+ .07	13.9

a Listed in the order of entry in the stepwise regression.

b Values after all significant variables have entered the regression.

c NS - Nonsignificant (below 70 percent).

d A positive coefficient indicates a negative relationship between level of conformity and performance, and vice versa for a negative coefficient; i. e., the sign of the coefficients indicates relationships between "nonconformity" of motivation levels and performance.

Standard Deviation for significant variables:

Sales	- \$4,426,000
Percent Change in Sales	- 14.7
Percent Change in Total Assets	- 18.8
Sales per Employee	- \$35,400
Fixed Asset Turnover	- 1.21
Current Ratio	- 1.88
Total Debt Ratio	- .18
Net Margin	- \$65,700
Net Margina as a Percent of Sales	- 3.2

Constant for significant variables:

Sales	- \$1,380,000
Percent Change in Sales	- 2.6
Percent Change in Total Assets	- 27.5
Sales per Employee	- \$111,200
Fixed Asset Turnover	- 1.72
Current Ratio	- -1.00
Total Debt Ratio	- .26
Net Margin	- \$132,000
Net Margin as a Percent of Sales	- 4.0

power centers. Therefore, the regression constant represents the value of the economic performance variable when there are identical motivation levels among the individuals within a power center, or identical levels of motivation among the three power centers. Increases in the conformity index represent increased differences in motivation levels among the individuals or power centers.

The conformity measures are not concerned with the levels of motivation themselves. Indeed, the general level of motivation for a power center may be quite high or quite low and have the same level of conformity.

Conformity Within the Key Employees Power Center

The results suggest very high interrelationships among the measures of conformity within the key employees power center. There was only one simple correlation coefficient below .540 between the measures of conformity (Appendix Table E.5). All of the simple correlation coefficients were positive which strongly suggests that as the key employees tended to possess identical motivation levels toward achieving any given objective, they also tended to possess identical motivation levels toward achieving any other objective. If this is really the case, cooperatives may be hindered by too little diversity of opinion and motivation among employees. They may think too much alike to efficiently evaluate alternatives.

The high simple correlation coefficients may be explained in part, however, by the presence of only one key employee who responded to the questionnaire in four of the sample cooperatives. Therefore, for these cooperatives there was perfect conformity of the levels of motivation within the key employees.

The high interrelationships among the conformity levels dampens somewhat the significance of the relationships between the conformity within the key employees power center and economic performance of the cooperatives. This should be kept in mind when reviewing the following material.

Size

Sales. Increased profitability motivation conformity of key employees was related to substantially decreased sales (Table 30). Since the constant was a low value in relation to the actual sales of the cooperatives (Appendix Table A), the results suggest dissimilar levels of profitability motivation among key employees may well enhance sales of the cooperatives. However, perhaps the causation is reversed in this case. When the cooperative has low sales, total net margin may be low and all key employees may tend to agree on increased profitability as a desirable objective. However, a cooperative with higher sales may have a substantial net margin position which leaves more of an area for disagreement as to the importance

of aggressively pursuing further profitability.

Total Assets. The results for total assets were similar to those for sales. Again, increases in total assets were related to decreases in profitability motivation conformity among key employees (Table 30). In this case the constant was negative which suggests conclusions regarding total assets similar to those drawn in the sales section above.

Rate of Growth

Percent Change in Sales. Within the key employees power center, increased levels of conformity of competitive power and community citizenship motivations were positively related to percent change in sales of the cooperatives (Table 30). This suggests similarity of motivation levels among key employees concerning these two objectives may be associated with an increased rate of growth in sales.

Percent Change in Total Assets. Increases in efficiency motivation conformity among key employees were negatively related to percent change in total assets of the cooperatives (Table 30). As the key employees tended to have unlike levels of motivation to achieve efficiency, the rate of growth in total assets tended to increase.

Efficiency

Sales Per Employee. The conformities of motivation for five objectives of key employees were at least 80 percent significant in their relationships with sales per employee of the cooperatives. Unit increases in efficiency motivation and innovation motivation conformities were related to rather substantial increases in annual sales per employee. On the other hand, unit increases in profitability, community citizenship, and growth motivation conformities were related to decreases in sales per employee (Table 30). Together these five key employees' conformity variables accounted for over 50 percent of the total variation in sales per employee. The efficiency, profitability, and innovation motivation conformities were the most significant with each at least 90 percent significant and contributions to the total R^2 by each of over 10 percent.

The most relevant relationships in this section seemed to be the increase in sales per employee associated with the increase in agreement among key employees concerning efficiency motivation, and the loss of sales per employee as conformity of motivation increased concerning growth.

Fixed Asset Turnover. Within the key employees power center, increases in motivation conformities for efficiency and growth objectives were positively related to cooperatives' fixed asset turnover

while increases in the conformity of profitability motivation were negatively related to cooperatives' fixed asset turnover (Table 30). It appears the more key employees agree on the priority of profitability, the lower fixed asset turnover falls, while the more key employees disagree as to the priority for growth and efficiency, the higher fixed asset turnover becomes.

Debt Position

Current Ratio. There were no objective motivation conformities for key employees related to the current ratio at or above the 80 percent significance level (Table 30).

Total Debt Ratio. Increases in competitive power motivation among key employees were negatively related to the total debt ratio of the sample cooperatives (Table 30). This relationship was highly significant and accounted for a substantial 31.4 percent of the total variation in the total debt ratio.

Profitability

Net Margin. Within the key employees power center, increases in the conformity to achieve profitability motivation were associated with decreases in total net margin of the cooperatives, while increases in the conformity to achieve efficiency motivation were associated with increases in total net margin (Table 30).

Net Margin as a Percent of Sales. Increases in the conformity of efficiency motivation within the key employees power center were positively related to net margin as a percent of sales (Table 30). This relationship was quite significant at the 97 percent level and explained 22.4 percent of the total variation in net margin on sales.

Conformity Within the Board of Directors Power Center

The simple correlation coefficients between the measures of conformity within the board of directors, unlike the case of the key employees, were relatively low (Appendix Table E.6). This suggests the relationships between the conformity within the board of directors and economic performance of the cooperatives may be somewhat more meaningful than the relationships between the conformity within the key employees and economic performance.

Size

Sales. Within the board of directors power center, increases in conformity concerning innovation, profitability, and efficiency motivations were negatively related to sales of the cooperatives while conformity concerning growth motivation was positively related to sales (Table 31). Changes in innovation and efficiency motivation conformities were related to the largest changes in sales.

Assuming the direction of causation is consistent with the

regression model, and since the constant represented a negative value for sales, some disparity on levels of motivation of objectives seems essential for the generation of large sales volumes. The exception was growth motivation where the results suggest dissimilar levels of motivation were associated with smaller sales.

Total Assets. Again, as with sales, increases in conformity concerning innovation, profitability, and efficiency motivations within the board of directors were negatively related to total assets of the cooperatives while increases in conformity concerning growth motivation were positively related to total assets (Table 31). Also, as with sales, changes in innovation and efficiency motivation conformities were related to the largest changes in total assets.

The constant was again a negative value suggesting some divergence on objective motivation levels generates greater total assets. On the other hand, increased agreement on growth motivation seems related to increased total assets. Although growth motivation was significant at only the 72 percent level, it seemed important because it was consistent with the results obtained in the sales section.

Referring back to the section on board of directors objective motivations, profitability and growth motivations were negatively related to both sales and total assets of the cooperatives (Table 18). Therefore, low sales and total assets levels of the sample cooperatives were associated with high profitability motivation and high profitability motivation conformity for the board of directors, and

high sales and total assets levels were associated with low profitability motivation and low profitability motivation conformity. Low sales and total assets levels of the sample cooperatives were associated with high growth motivation and low growth motivation conformity of the board of directors, and high sales and total assets levels were associated with low growth motivation and high growth motivation conformity.

Rate of Growth

Percent Change in Sales. An increase in conformity levels within the board of directors on either competitive power or efficiency motivation was associated with an increase in the percent change in sales of the sample cooperatives (Table 31). Competitive power motivation conformity was highly significant (98 percent level) and contributed an impressive 27.1 percent to the total R^2 .

These results suggest the rate of growth of cooperatives would increase as the individuals within the board of directors tended to have similar levels of motivation to achieve competitive power and efficiency.

Percent Change in Total Assets. There were no objective motivation conformities within the board of directors which were related to percent change in total assets at or above the 80 percent significance level (Table 31).

Efficiency

Sales Per Employee. Increases in growth motivation conformity within the board of directors were related to higher sales per employee (Table 31). In the board of directors objective motivations section, growth motivation was negatively related to sales per employee of the sample cooperatives (Table 20). Therefore, a low level of sales per employee was associated with a high average level of growth motivation for the board of directors, but a low similarity among the motivation levels of the board members and vice versa for a high sales per employee.

Fixed Asset Turnover. There were no objective motivation conformities within the board of directors which were related to fixed asset turnover at or above the 80 percent significance level (Table 31).

Debt Position

Current Ratio. Increases in growth motivation conformity within the board of directors were related to a decreased current ratio for the cooperatives (Table 31). As the similarity of the growth motivation levels of the board members increased, current assets tended to decline relative to current liabilities.

Total Debt Ratio. Within the board of directors' power center,

increases in conformity concerning profitability, community citizenship, and competitive power motivations were negatively related to the total debt ratio (Table 31). All three of these conformity measures were highly significant, at or above the 97 percent significance level. Together they explained 51.7 percent of the variation in the total debt ratio.

The constant for the significant objective motivation conformities was a negative value. Some disparity among the levels of motivation to achieve the objectives mentioned is apparently related to increased total debt with respect to total assets.

Profitability

Net Margin. Increased efficiency motivation conformity among the board of directors was related to decreased net margin for the cooperatives (Table 31). The constant was a negative value which indicates a net loss associated with those cooperatives whose board members had identical efficiency motivations. This suggests that some differences in levels of motivation to achieve efficiency might lead to increased profitability, or, if the causation is the reverse of that assumed, cooperatives with low profits are more likely to have boards where all board members have the same level of motivation to achieve efficiency.

Net Margin as a Percent of Sales. Within the board of

directors, increases in conformity concerning competitive power motivation were positively related to net margin as a percent of sales for the cooperatives while increases in conformity concerning growth motivation were negatively related to net margin as a percent of sales (Table 31). Both were significant over the 90 percent significance level and both contributed substantially (17.4 percent and 14.8 percent) to the total R^2 .

In the section on the board of directors' objective motivations, growth motivation was positively related to net margin as a percent of sales (Table 22). Therefore, a low net margin on sales was associated with a low level of growth motivation and a high level of growth motivation conformity of the board of directors and vice versa for a high net margin on sales.

Conformity Among the Power Centers

The simple correlation coefficients between the objective motivation conformities among the power centers were relatively low, with the exception of a few scattered cases. These coefficients are shown in Appendix Table E. 7.

Size

Sales. Among the power centers, increased conformity of competitive power motivation was negatively related to sales of the

cooperatives while increased conformity of growth motivation was positively related to sales (Table 32). Both were significant at the 90 percent level or higher.

Competitive power and growth motivation conformities had a simple correlation coefficient of .463 between them which is intuitively reasonable (Appendix Table E. 7). However, an apparent contradiction is present, for competitive power and growth motivation conformities have opposite relationships with sales, but are positively associated with each other.

The relationship between growth motivation conformity and sales seems especially meaningful. It suggests that as the three power centers approach having the same growth motivation levels, the actual sales of the cooperatives tend to increase.

Total Assets. There were no objective motivation conformities among the power centers related to total assets of the cooperatives at or above the 80 percent significance level (Table 32). This suggests corporate conformity of levels of motivation to achieve various business objectives may be independent of size of the cooperatives as measured by total assets.

Rate of Growth

Percent Change in Sales. Increased conformity among power centers for growth and efficiency motivations were negatively related

to cooperatives' rate of growth in sales while increased conformity among power centers for competitive power motivation was positively related to cooperatives' rate of growth in sales (Table 32). Growth motivation conformity and competitive power motivation conformity were both significant over the 95 percent level and contributed 23.8 percent and 15.5 percent respectively to the total R^2 .

Referring back to the section on the corporate levels of motivation to achieve objectives, growth motivation was positively related to rate of growth in sales while competitive power motivation was negatively related to rate of growth in sales (Table 24). Therefore, a low rate of growth in sales was associated with low growth motivation and high growth motivation conformity, but with a high competitive power motivation and low competitive power motivation conformity. The opposite relationships hold for a high rate of growth in sales.

Percent Change in Total Assets. Increased conformities of profitability and competitive power motivations were positively associated with percent change in total assets of the cooperatives while increased conformity of growth motivation was negatively associated with percent change in total assets of the cooperatives (Table 32). Both growth motivation and profitability motivation conformities were significant over the 95 percent level and each contributed approximately 20 percent to the total R^2 . Although competitive power motivation conformity was only significant at the 78 percent level, it was

included because it was also negatively related to rate of change in total assets.

In the section concerning the corporate levels of motivation to achieve objectives, growth motivation was positively related to rate of change in total assets and profitability motivation was negatively related to rate of change in total assets (Table 24). Therefore, increases in the rate of change in total assets were associated with increases in growth motivation and decreases in growth motivation conformity and decreases in profitability motivation and increases in profitability motivation conformity.

Efficiency

Sales Per Employee. Among power centers, increased conformity of profitability and growth motivations were positively related to cooperatives' sales per employee while increased conformity of community citizenship motivation was negatively related to sales per employee (Table 32).

The results suggesting an increase in sales per employee associated with increased similarity of growth motivation levels among power centers seems especially reasonable. However, referring back to the section concerned with corporate levels of motivation, growth motivation was negatively related to cooperatives' sales per employee (Table 25). Therefore, high corporate growth motivation

seems related to low growth motivation conformity among the power centers with respect to sales per employee.

Fixed Asset Turnover. Among power centers, increased conformity of competitive power and innovation motivations were negatively associated with fixed asset turnover (Table 32). Both relationships were significant over the 90 percent significance level and together they accounted for 36.5 percent of the variation in fixed asset turnover.

Debt Position

Current Ratio. Among power centers, increased conformity of employee performance and development, efficiency, and competitive power motivations were negatively related to the current ratio of the cooperatives. On the other hand, increased innovation and community citizenship motivations were positively related to the current ratio (Table 32). All of these objective motivation conformities related to the current ratio were significant over the 95 percent level. Employee performance and development motivation conformity contributed the greatest amount to the total R^2 (37.6 percent), while each of innovation, efficiency, and community citizenship motivation conformities contributed approximately 10 percent to the total R^2 . The total variation in the current ratio accounted for by these objective motivation conformities together was a huge 71.3 percent leaving less than

30 percent to be explained by factors other than the levels of conformity among the power centers concerning objective motivations.

One reason for the entrance of so many objective motivation conformities into the regression analysis and the resultant high total R^2 may be the interrelationship among these conformity levels. In several cases these interrelationships seemed relatively high as indicated by high simple correlations. The simple correlation was .348 between innovation motivation and competitive power motivation conformities, was .388 between innovation motivation and employee performance and development motivation conformities, was .393 between community citizenship motivation and competitive power motivation conformities, and was .548 between innovation motivation and efficiency motivation conformities (Appendix Table E. 7). These correlations were all positive meaning the entrance of one of the pairs into the regression might well have brought in the other objective motivation conformity with which it was highly correlated. Therefore, it is hard to detect which of these conformity levels were, in fact, related to the current ratio.

Total Debt Ratio. There were no objective motivation conformities among the power centers which were related to the total debt ratio at the 80 percent significance level or higher (Table 32).

Profitability

Net Margin. Increased profitability motivation conformity among the power centers was related to increased total net margin of the cooperatives in the sample (Table 32). This relationship was highly significant at the 95 percent level and contributed a substantial 18.3 percent to the total R^2 .

Net Margin as a Percent of Sales. Increased profitability motivation conformity among the power centers was also related to increased net margin as a percent of sales for the cooperatives in the sample (Table 32). Although the relationship was significant at only the 77 percent level, it was mentioned for it supports the relationship found in the previous section concerning total net margin.

It appears that cooperatives in which the power centers have similar levels of motivation to achieve profitability actually do experience relatively greater profitability, both total profits and return per dollar of sales. Looking back to previous material, it also is evident these cooperatives experience a faster rate of growth of assets, have higher sales per employee, and may tend to have a lower total debt ratio.

VIII. RELATIONSHIP BETWEEN MARKET STRUCTURE AND ECONOMIC PERFORMANCE

Market structure theory explains the relationship between the economic performance of a market and characteristics of that market such as the degree of seller concentration, the degree of buyer concentration, the degree of product differentiation, and the condition of entry to the market (3). This study examines the relationships between economic performance and two measures of seller concentration in a market, the number of competitors in each of the sample cooperative's market areas and the largest share of the market held by any one business in the cooperative's major product line. Summaries of these relationships are given in Tables 33 and 34.

There were no significant relationships between the number of competitors in the cooperatives' market area and the economic performance of the sample cooperatives, at or above the 70 percent significance level (Table 33). The highest R^2 for any of the regressions relating numbers of businesses in the market area to various performance variables was less than five percent, suggesting the number of competitors has little to do with economic performance of cooperatives.

Three cooperative performance variables (sales, rate of change in sales, and net margin on sales) were related to the

TABLE 33. Relationship Between Number of Competitors and Economic Performance

	T Value	Significance Levels ^a	Coefficient and Sign	R ²
<u>Size</u>		(%)		(%)
Sales	.635	NS	+	2.1
Total Assets	.502	NS	+	1.3
<u>Rate of Change</u>				
Percent Change in Sales	.347	NS	-	.7
Percent Change in Total Assets	.310	NS	-	.5
<u>Profitability</u>				
Net Margin	.169	NS	-	.2
Net Margin as a Percent of Sales	.239	NS	-	.3
<u>Efficiency</u>				
Sales per Employee	.036	NS	+	0
Fixed Asset Turnover	.427	NS	-	1.0
<u>Debt Position</u>				
Current Ratio	.978	NS	-	4.8
Total Debt Ratio	.208	NS	+	.2

a NS - Nonsignificant (below 70 percent)

TABLE 34. Relationship Between Share of the Market and Economic Performance

	T Value	Significance Levels ^a	Coefficient and Sign	R ²
		(%)		(%)
<u>Size</u>				
Sales	1.057	70	+\$62,500	5.6
Total Assets	.962	NS	+	4.7
<u>Rate of Change</u>				
Percent Change in Sales	2.704	99	-.55%	28.9
Percent Change in Total Assets	.992	NS	-	5.2
<u>Profitability</u>				
Net Margin	.673	NS	+	2.3
Net Margin as a Percent of Sales	1.467	84	-.06%	10.2
<u>Efficiency</u>				
Sales per Employee	.384	NS	+	.8
Fixed Asset Turnover	.085	NS	-	0
<u>Debt Position</u>				
Current Ratio	.728	NS	-	2.7
Total Debt Ratio	.415	NS	+	.9

a NS - Nonsignificant (below 70 percent)

Constant:	Sales	- \$516,000
	Percent Change in Sales	- 37.1
	Percent Net Margin	- 6.4

largest share of the market held by any firm competing in the cooperatives' major product line.

An increase of one percent in market share by the major business was associated with an increase of \$62,500 in the cooperatives' sales (Table 34). In other words, as one business tended to become more dominant in the market area, sales of the cooperatives tended to rise. However, the significance level was a relatively low 70 percent and the R^2 was only 5.6 percent. This low significance level suggests factors other than the concentration of the share of the market are likely more important in relation to sales of the cooperatives.

A one percent increase in market share was associated with a decline in the rate of sales growth of .55 percent and a decline of net margin on sales of .06 percent (Table 34). The relationship between market share and rate of growth in sales was highly significant (99 percent level) and the R^2 was 28.9 percent. The relationship with net margin on sales was significant at the 84 percent level, with an R^2 of 10.2 percent.

The decline in rate of growth of cooperatives' sales associated with an increase in market share, by the business in the market area with the greatest share of the cooperatives' major product line, seems intuitively reasonable. If the cooperative itself is the dominant business, as it is in all but three market areas, increases in

the share of the market would reasonably be associated with larger-sized cooperatives which frequently experience a slower rate of growth than smaller cooperatives.

The decline in net margin on sales associated with the increase in market concentration in the hands of one business in the market area would seem to disagree with market structure theory, especially if the cooperative is the dominant business. Market structure theory predicts higher profits by the businesses in a market where all businesses have a large share of the total sales.

IX. SUMMARY AND CONCLUSIONS

Business enterprise has evolved from owner-manager businesses to corporations (cooperatives), with separation of management from ownership and an internal dispersion of decision making authority. The traditional owner-manager was responsible for all entrepreneurial functions. The separation of businesses into internal power centers (top management, key employees, and board of directors) raises important questions concerning the separation of the functions once performed by that one entrepreneur--particularly which of these new power centers is now responsible for determining the objective structure of the business.

Economists claim the sole objective of a business (cooperative) is profit maximization in both perfect competition and oligopolistic market situations. Furthermore, it apparently is assumed the level of motivation of the entrepreneur to maximize profits is the highest possible. These assumptions work well in predicting the economic performance of a business in a perfectly competitive market. However, in an oligopolistic market, these same assumptions work less desirably in predicting the economic performance of a business. In an oligopolistic market, "competitive" pressure is somewhat less than that present in a perfectly competitive market and, therefore, there is less pressure to maximize profits for the business to

survive, apparently allowing the business to pursue a wider range of objectives.

Business theorists support a concept of multiple objectives, as do behavioral scientists, who claim behavior is directed toward many objectives. Furthermore, behavioral scientists indicate that motivation to achieve an objective may be significantly more important in predicting behavior than the objective itself. This study brings together the concepts of levels of motivation, objectives, and economic performance of cooperatives to facilitate understanding cooperatives' behavior and improve prediction of their economic performance.

The general objectives of this study were: (1) Identify the corporate and individual power centers' levels of motivation to achieve objectives and evaluate the relationships of these motivation levels to economic performance; (2) Evaluate the relationships between the degrees of conformity of the objective motivations within and among cooperatives' power centers and cooperatives' economic performance; and (3) Evaluate the relationship between the degree of seller concentration in a market area and economic performance.

Mail questionnaires were used to collect data concerning the objective motivation levels, economic performance, and market area seller concentration of farm supply cooperatives in the Pacific Northwest. The levels of motivation were measured for seven

prespecified objectives: innovation, profitability, employee performance and development, community citizenship, efficiency, competitive power, and growth. Economic performance was measured in five areas: size, rate of growth, efficiency, debt position, and profitability. Two measures of the degree of seller concentration were used: the number of competitors in the market area, and the percent share of sales in the cooperatives' major product line controlled by the leading seller of that product line in the market area.

Differences Among Power Centers Concerning Levels of Motivation

The levels of motivation to achieve a specified set of objectives were examined for three power centers within the cooperatives--top management, key employees, and board of directors--and for these power centers collectively (corporate). Two hypotheses were proposed: (1) Each of the three power centers (top management, key employees, and board of directors) has a different level of motivation to achieve corporate objectives; and (2) There is a relationship between power centers' levels of motivation to achieve corporate objectives and the cooperatives' economic performance; this relationship is closest with top management, next closest with the board of directors, and least close with key employees.

The evidence in this study supports the first hypothesis, revealing substantial differences in motivation levels among power centers.

These differences in motivation levels among power centers seem to support the approach of viewing each of these power centers as a separate, semi-independent group within a business. Realizing these differences exist and evaluating the nature of these differences will likely aid a decision-maker or an advisor in working with the business by bringing to focus differences in priorities among internal decision centers. It also seems to suggest that it would be important to have a manager competent to recognize and reconcile differences in priorities among groups within the cooperative who had some decision-making impact on the cooperative.

The general evidence in the study also supports the first part of the second hypothesis which proposes there are relationships between power centers' levels of motivation and economic performance. The levels of motivation to achieve various objectives accounts for a substantial amount of the variation in several of the economic performance variables evaluated in this study.

The hypothesis that key employees' objective motivations are least related to economic performance of the cooperatives is also supported by the study. However, top managements' and the board of directors' objective motivations appeared about equally related to economic performance. This is somewhat contrary to the second hypothesis which stated top managements' objective motivations would be more closely related to economic performance than would the

board of directors' objective motivations. Top managements' objective motivations appeared to be more closely related to debt position, profitability, and rate of growth in sales while the board of directors' objective motivations appeared to be more closely related to size, efficiency, and rate of growth in total assets.

Relationship Between Objective Motivations and Economic Performance

The levels of motivation to achieve seven specified objectives were evaluated. Specific hypotheses proposed concerning the relationships between objective motivations and economic performance of cooperatives were: (1) There is a negative relationship between growth motivation and size of cooperatives; (2) There is a positive relationship between growth motivation and rate of growth of cooperatives; (3) There is a positive relationship between profitability motivation and total profitability of cooperatives; (4) There is a positive relationship between both growth and competitive power motivations and debt position of cooperatives; and (5) There is a positive relationship between efficiency motivation and efficiency of cooperatives. The results of testing these hypotheses will be discussed in the following material by referring to Table 35 where the nature of all relationships, significant at or above the 80 percent significance level, between objective motivations and economic performance are presented.

TABLE 35. Summary of Relationships Between Objective Motivations and Economic Performance^a

	INNOVATION Top Management Key Employees Board of Directors Corporate ^b	PROFITABILITY Top Management Key Employees Board of Directors Corporate	EMPLOYEE PERFORMANCE AND DEVELOPMENT Top Management Key Employees Board of Directors Corporate	COMMUNITY CITIZENSHIP Top Management Key Employees Board of Directors Corporate	EFFICIENCY Top Management Key Employees Board of Directors Corporate	COMPETITIVE POWER Top Management Key Employees Board of Directors Corporate	GROWTH Top Management Key Employees Board of Directors Corporate
<u>Size</u>							
Sales		+	-	-		-	-
Total Assets	+	+	-	-	-	+	-
<u>Rate of Growth</u>							
Percent Change in Sales		+		+	+	+	+
Percent Change in Total Assets		+		+	+	-	+
<u>Efficiency</u>							
Sales per Employee	-			+	+		-
Fixed Asset Turnover		-	-	+	+	+	-
<u>Debt Position</u>							
Current Ratio	+	+	+	-	-	+	-
Total Debt Ratio	+	+	-	-	-	+	+
<u>Profitability</u>							
Net Margin						-	-
Net Margin as a Percent of Sales		-	+	+	+	-	+

^aOnly those relationships were included which were significant at or above the 80 percent significance level.

^bCorporate - Power Centers Collectively

Innovation Motivation

There was only one consistent relationship concerning innovation motivation and the economic performance variables--the positive relationship between the board of directors' innovation motivation and the rate of growth of the cooperatives, both in terms of rate of growth in sales and rate of growth in total assets. There were no relationships with the rate of growth for either top managements' or key employees' innovation motivation. This implies the rate of growth of a cooperative is not dependent upon the strength of top managements' and key employees' motivations to introduce new products and services, but is rather a function of the board of directors' level of priority on innovation. Such a conclusion seems to emphasize how critical it is to have a well selected board, to have a board willing to take the risks of innovation, a board placing a higher priority on innovation if the cooperative is indeed to experience a more rapid rate of growth.

Profitability Motivation

Profitability motivation of top management was positively related to both size of cooperative variables, sales and total assets. The only other relationship to size of the cooperatives was a negative relationship between the board of directors' profitability motivation and sales. This implies top managers of large cooperatives are more profit-oriented than are top managers of small cooperatives.

Profitability motivation was negatively related to fixed asset

turnover for all individual power centers and the power centers collectively. This suggests cooperatives who are highly motivated to achieve profits must be willing, either explicitly or implicitly, to sacrifice efficiency in the form of fixed asset turnover in order to achieve profits (net margin). New investment to support sales growth is likely to run ahead of the actual sales growth. On the other hand, in this instance the causation in the relationship may be in reverse of that assumed by the regression. It is conceivable that cooperatives with low asset turnover have a low profit problem, and consequently are more highly motivated to pursue profitability.

There were no relationships, either positive or negative at or above the 80 percent significance level, between profitability motivation and the total net margin of the cooperatives. One hypothesis for this study proposed a positive relationship between profitability motivation and total profitability of cooperatives. These results reject this hypothesis. The resulting relationships between profitability motivation and net margin as a percent of sales were inconclusive-- a negative relationship between top managements' profitability motivation and net margin on sales and a positive relationship between the board of directors' profitability motivation and net margin on sales. In conclusion, the results of this study seem to suggest a highly profit-oriented farm supply cooperative may or may not experience

high actual profits.

Employee Performance and Development Motivation

The results indicate employee performance and development motivation may be strongly related to several economic performance areas of the cooperatives--particularly the cooperatives' size, rate of growth, efficiency, and the current ratio. Employee performance and development motivation of key employees was negatively related to sales of the cooperatives while employee performance and development motivation of the board of directors was negatively related to both sales and total assets of the cooperatives. This suggests these two power centers in smaller cooperatives are more highly motivated than in larger cooperatives to develop their employees.

Employee performance and development motivations of top management and the board of directors were positively related to the rate of growth of cooperatives--both rate of growth in sales and rate of growth in total assets--while employee performance and development motivation of the power centers collectively was positively related to rate of growth in sales. Both top managements' and key employees' employee performance and development motivations were positively related to fixed asset turnover while the board of directors' employee performance and development motivation was positively related to sales per employee. These results strongly suggest high

employee performance and development motivation might well be a significant factor in improving the efficiency and rate of growth of the cooperatives.

Employee performance and development motivations of top management, the board of directors, and the power centers collectively were negatively related to the current ratio of the cooperatives. This seems logical if this objective motivation is also positively related to rate of growth, for more rapidly growing organizations frequently tend to experience tighter working capital positions (lower current ratios).

Community Citizenship Motivation

The levels of motivation to achieve community citizenship were not consistently related to any of the economic performance variables. These results imply the power centers' strength of feeling about involving the cooperative in community affairs, through donations or participation, has no consistent relationship with size, rate of growth, efficiency, debt position, or profitability of the cooperative. This lack of a consistent relationship between community citizenship motivation and economic performance is likely very important, particularly since there is current public pressure for business to become more involved and "responsible" in the community. The evidence in this study, however, indicates decisions

made concerning the involvement of the cooperative in community activities should perhaps be made for altruistic purposes only, and the cooperatives should not expect any particular performance benefits for itself as a consequence of such community involvement. This seems logical, if one adheres to the philosophy of the market, for business thrives basically by serving the needs of customers, not the needs of the "community at large."

Efficiency Motivation

Top managements' efficiency motivation was positively related to sales per employee of the cooperatives. Efficiency motivations of key employees and the power centers collectively were positively related to fixed asset turnover of the cooperatives. In these cases only, high efficiency motivation was related to high measures of efficiency. These results support only to a limited extent the proposed hypothesis concerning efficiency motivation, which suggested increased efficiency motivation would be positively related to increased actual efficiency. Further research is apparently needed in this area to clarify the validity of this hypothesis.

The board of directors' efficiency motivation had no relationship with actual efficiency or any of the other economic performance variables. The implication seems to be that the boards may well be concerned with efficiency motivation, but have little actual control

over, or impact on, the functioning of the cooperative in this vital area.

Competitive Power Motivation

Competitive power motivation was consistently related to many economic performance areas of the cooperatives--particularly rate of growth, fixed asset turnover, the current ratio, and profitability. Competitive power motivation of top management was negatively related to rate of change in total assets, competitive power motivation of the board of directors was negatively related to both rate of growth in sales and total assets, and competitive power motivation of the power centers collectively was negatively related to the rate of growth in sales. Top managements' competitive power motivation was also negatively related to net margin and net margin as a percent of sales and competitive power motivation of the power centers collectively was negatively related to net margin as a percent of sales. In other words, for these relationships, high competitive power motivation was associated with a low growth rate and low profitability of the cooperatives. This suggests increased motivation toward market dominance or explicit leadership may become detrimental to a cooperative's rate of growth and profitability. Like community citizenship, this objective motivation may well be a means of siphoning off cooperatives' resources into nonproductive endeavors, to concentrate

on overpowering competition rather than developing a superior ability to serve the needs of current and potential customers. The cost of this diversion from the economic goal of customer service may well be a low growth rate and low profits. On the other hand, the causation may be the inverse of that assumed--cooperatives with low profits and low growth rates may perceive having high competitive power as a means of improving profits and growth, and hence, are more highly motivated to pursue competitive power.

Competitive power motivations of the key employees and the power centers collectively were positively related to fixed asset turnover and the current ratio. Top managements' competitive power motivation was positively related to fixed asset turnover and the board of directors' competitive power motivation was positively related to the current ratio. For these relationships, this implies high competitive power motivation is related to high sales in relation to fixed assets and high current assets in relation to current liabilities. A farm supply cooperative with high fixed asset turnover might well be expected to have a more healthy cash flow and lower average inventory levels, to be a more closely controlled operation. Consequently, these relationships seem to be consistent. The results of this study concerning the relationship between competitive power motivation and debt position does not support the hypothesis that a position relationship exists between competitive power and debt.

Growth Motivation

Growth motivation of the board of directors and the power centers collectively was negatively related to size of the cooperatives-- both annual sales and total assets. This implies small cooperatives had high growth motivation which suggests size may, in fact, determine the level of motivation to grow. Larger cooperatives, perhaps being satisfied with their size, may well be more motivated to achieve other objectives. The results support the hypothesis that a negative relationship exists between growth motivation and size of the cooperatives. The negative relationships between sales per employee and growth motivation of the board of directors and growth motivation of the power centers collectively seems logically related to the negative relationships with sales mentioned above. If high growth motivation is associated with low sales volume, it seems likely that sales volume per employee might also be low.

Growth motivations of all individual power centers and of the power centers collectively were related to both rate of growth in sales and rate of growth in total assets, with the exception of no relationship between key employees' growth motivation and the rate of growth in sales. These results strongly support the hypothesis that there is a positive relationship between growth motivation and actual rate of growth of cooperatives.

Another hypothesis of this study for growth motivation proposed a positive relationship between growth motivation and relative use of debt. It was felt those cooperatives strongly motivated to grow would partially finance their growth through increased debt. This hypothesis was rejected by the results which showed no consistent positive or negative relationships between growth motivation and debt position.

Relationship Between Objective Motivation Conformities
and Economic Performance

Conformity among the levels of motivation to achieve objectives was measured within the key employees and board of directors' power centers and among the three power centers--top management, key employees, and board of directors. These measures of conformity were indicators of the degree of similarity of the level of motivation to achieve each specified objective within and among the power centers. These conformity levels were compared to the economic performance of the cooperatives; the resulting significant relationships are shown in Table 36.

The conformity-economic performance hypothesis tested was: The economic performance of cooperatives will increase as the conformity of the levels of motivation increases within and among power centers. Referring to Table 36, all positive relationships between motivation conformity and economic performance would tend to support this general hypothesis while all negative relationships would tend to

TABLE 36. Summary of Relationships Between Objective Motivation Conformities and Economic Performance^a

	INNOVATION Key Employees	Board of Directors	Among Power Centers	PROFITABILITY Key Employees	Board of Directors	Among Power Centers	EMPLOYEE PERFORMANCE AND DEVELOPMENT Key Employees	Board of Directors	Among Power Centers	COMMUNITY CITIZENSHIP Key Employees	Board of Directors	Among Power Centers	EFFICIENCY Key Employees	Board of Directors	Among Power Centers	COMPETITIVE POWER Key Employees	Board of Directors	Among Power Centers	GROWTH Key Employees	Board of Directors	Among Power Centers	
<u>Size</u>																						
Sales		-		-																		
Total Assets		-		-									-								+	+
<u>Rate of Growth</u>																						
Percent Change in Sales										+				+								
Percent Change in Total Assets													-									
<u>Efficiency</u>																						
Sales per Employee	+			-									+								+	+
Fixed Asset Turnover				-									+								+	+
<u>Debt Position</u>																						
Current Ratio																						
Total Debt Ratio																						
<u>Profitability</u>																						
Net Margin				-																		
Net Margin as a Percent of Sales																						

^a Only those relationships were included which were significant at or above the 80 percent significance level.

discredit it. Inspection of this table reveals the following few consistent positive relationships: between efficiency motivation conformity within the key employees' power center and both efficiency and profitability of cooperatives; between competitive power motivation conformity within both key employees and the board of directors' power centers and rate of growth in cooperatives' sales; between competitive power motivation conformity among all power centers and rate of growth in both annual sales and total assets of cooperatives; and between growth motivation conformity both within the board of directors' power center and among all power centers and annual sales of the cooperatives. These few specific cases of positive relationships notwithstanding, the general hypothesis was rejected. It appears that certain objective motivation conformities are positively related to certain areas of performance of cooperatives, while other relationships are negative. Consequently, a more detailed in-depth evaluation of each objective motivation conformity is necessary to develop any accurate predictions of economic performance of cooperatives based on these conformities.

Innovation Motivation Conformity

The only consistent relationships between innovation motivation conformity and the economic performance of cooperatives were the negative relationships between innovation motivation conformity

within the board of directors' power center and size of cooperatives-- both annual sales and total assets. This suggests high similarity of innovation motivation levels exists among board members in smaller sized cooperatives, possibly because they agree that innovation is a priority means of coping with whatever problems they may feel are a result of their size.

Profitability Motivation Conformity

Profitability motivation conformities within both key employees and the board of directors' power centers were negatively related to cooperatives' size--both sales and total assets. High similarity among levels of motivation to achieve profits within these two power centers was associated with relatively smaller cooperatives. Conversely, as the cooperatives grew larger, individuals in these power centers tended to have increasingly dissimilar profitability motivation levels.

Profitability motivation conformity within the key employees' power center was also negatively related to efficiency of the cooperatives--both sales per employee and fixed asset turnover. Therefore, it seems, at least within the key employees' power center, increased conformity of profitability motivation levels, irrespective of whether these motivation levels were high or low, was associated with small, inefficient cooperatives. This suggests several possibilities, one

that some disagreement as to the priority to place on profitability especially among key employees, may be more "healthy" for the cooperative than agreement. Another possibility is that because of the cooperative being smaller and more inefficient, key employees are inclined to have similar levels of motivation to achieve profitability. And, in larger, more efficient cooperatives, the pressure to pursue profitability may be less, consequently there is more variability among key employees as to levels of profitability motivation.

Employee Performance and Development Motivation Conformity

The only significant relationship in this section was a negative relationship between employee performance and development motivation conformity among the three power centers and the current ratio of the sample cooperatives. This strongly suggests conformity of the levels of motivation to achieve employee performance and development has very little, if any, relationship with the economic performance of farm supply cooperatives.

Community Citizenship Motivation Conformity

Community citizenship motivation conformities among the individuals within the key employees' and board of directors' power centers and among the three power centers had no consistent relationships with any of the economic performance variables examined in

this study. This suggests community citizenship motivation conformity may have a very minor effect, at best, on the economic performance of farm supply cooperatives.

Efficiency Motivation Conformity

Efficiency motivation conformity within the key employees power center was positively related to both profitability measures, total profits, and net margin on sales, and to both efficiency measures, sales per employee and fixed asset turnover. In other words, relatively higher similarity of efficiency motivation levels among the key employees was associated with the most efficient, most profitable cooperatives.

On the other hand, efficiency motivation conformity within the board of directors' power center was negatively related to size of the cooperatives--both annual sales and total assets. Cooperatives in which the board members had similar efficiency motivation levels tended to be smaller.

Competitive Power Motivation Conformity

Conformities of competitive power motivation within both the key employees' and board of directors' power centers and among the top management, key employees, and the board of directors' power centers were positively related to percent change in sales of the

cooperatives. Conformity of competitive power motivation among the power centers was also positively related to percent change in total assets. These positive relationships between rates of growth and conformity of competitive power motivation suggest the individuals within a rapidly growing cooperative may be more aware, or have more information about the market forces influencing their cooperative and may be more sure of the position of their cooperative relative to the market. In contrast, the individuals within a slower growing cooperative may take the market forces concerning their cooperative for granted and have no well-formed ideas about competitive power or the position they wish to develop in the market, thus bringing about greater differences in competitive power motivation levels. In any event, it seems clear that more rapidly growing cooperatives have greater conformity of levels of motivation to achieve competitive power throughout their organization.

Conformities of competitive power motivations within both the key employees' and board of directors' power centers were negatively related to the total debt ratio. High consistency of competitive power motivation levels within these two power centers was related to low total debt in relation to total assets.

It appears that cooperatives in which there is high competitive power motivation conformity are likely to have sales growing at a faster rate than assets, which would seem to partially support the

negative relation of this conformity to relative use of debt. With a relatively greater profit margin (supported by a positive relationship between board of directors' competitive power motivation conformity and net margin on sales), and investment increasing slower than sales, it seems likely that sufficient cash flow would be generated to allow a declining total debt ratio.

Growth Motivation Conformity

The relationships between growth motivation conformity within the board of directors, and conformity among the three power centers, and cooperatives' annual sales were positive. This suggests the conformity of growth motivation within the board has a particular impact on the sales volume of the cooperative, and that the greater the conformity of growth motivation levels among key employees, top management, and the board, the more likely the cooperative will have a large sales volume. It should be noted, however, that there were no significant growth motivation conformity-total asset relationships identified, which may well suggest that cooperatives' sales volume will be higher, regardless of the cooperatives' asset base, if the power centers have consistent levels of motivation to achieve growth.

Growth motivation conformities within the board of directors' power center and among the power centers were positively related to sales per employee, which seems to be consistent with the positive

relationships to level of sales.

Growth motivation conformity among the three power centers was negatively related to rate of growth of cooperatives--both rate of growth in sales and rate of growth in total assets. In other words, cooperatives with a relatively faster rate of growth tended to have greater dissimilarity of growth motivation levels among the power centers. This suggests the actual rate of growth at these high levels may be at, or approaching, a satisfactory rate of growth for several persons in the organization and, therefore, there is some divergence among the power centers concerning their levels of motivation to achieve further growth.

Relationship Between the Degree of Seller Concentration in a Market Area and Economic Performance

Two measures of the degree of seller concentration in the market areas, number of competitors and "market share" (the percent of the market held by the business in the market area with the largest share of sales in the cooperative's major product line), were compared with economic performance of the cooperatives. The hypothesis proposed for this area was: The economic performance of the cooperatives will increase with increases in the degree of seller concentration in the market area of the cooperatives.

The number of competitors in the market area had no relationships, either positive or negative, with any of the ten economic

performance variables examined in this study.

The market share controlled by the dominant business in the cooperative's major product line was positively related to cooperatives' sales and negatively related both to cooperatives' rate of growth of sales and to net margin as a percent of sales.

The results of this study rejected the proposed hypothesis of a positive relationship between seller concentration and performance of the cooperatives. Of the 20 relationships examined, only three were significant. Of these three, only one supported the hypothesis, the positive relationship between market share and sales. Therefore, it appears there is less relationship between the degree of seller concentration in a market area and business performance than is frequently assumed, at least for local farm supply cooperatives. And in this study, knowledge of the cooperatives' levels of motivation to achieve various objectives would lead to better prediction of the cooperatives' economic performance than would knowledge of the degree of seller concentration in the cooperatives' market area.

This study concluded there are substantial differences in levels of motivation to achieve objectives among power centers and also substantial differences in conformities of levels of motivation to achieve objectives among power centers. The levels of motivation to achieve objectives of top management and the board of directors are both substantially related to the economic performance of farm supply cooperatives. In contrast, key employees' levels of motivation to achieve objectives are somewhat less related to the economic performance of farm supply cooperatives.

The levels of motivation to achieve profitability, employee performance and development, competitive power, and growth motivation are most likely to have an impact on the economic performance of the cooperatives and the levels of motivation to achieve innovation, community citizenship, and efficiency are least likely to have an impact on the economic performance of cooperatives.

In the conformity area, the conformities of the levels of motivation to achieve profitability, efficiency, competitive power, and growth are most likely to have an impact on the economic performance of cooperatives while the conformities of the levels of motivation to achieve innovation, employee performance and development, and community citizenship are least likely to have an impact on the economic performance of cooperatives.

The results show the degree of seller concentration in the

cooperatives' market area is less useful than the levels of motivation to achieve objectives in predicting the economic performance of cooperatives.

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APPENDICES

APPENDIX TABLE A. Economic Performance Parameters

	Range		Mean	Median	Standard Deviation
<u>Size</u>					
Sales	\$154,000-\$20,894,000		\$3,017,000	\$1,346,000	\$4,581,000
Total Assets	\$116,000-\$ 9,489,000		\$1,545,000	\$ 761,000	\$2,076,000
<u>Rate of Growth</u>					
Percent Change in Sales	-24.3	47.2	14.7	14.4	18.0
Percent Change in Total Assets	-12.7	77.0	17.6	11.3	23.1
<u>Profitability</u>					
Net Margin	\$-5,000	\$244,000	\$73,000	\$46,000	\$69,000
Net Margin as a Percent of Sales	0.0	12.7	4.0	2.9	2.6
<u>Efficiency</u>					
Sales per Employee	\$39,000	\$211,000	\$81,000	\$77,000	\$38,000
Fixed Asset Turnover	1.8	7.7	3.7	3.6	1.4
<u>Debt Position</u>					
Current Ratio	1.03	15.30	3.16	2.62	2.97
Total Debt Ratio	.097	.696	.358	.340	.176

APPENDIX B

Priorities and Performance Study
Farm Supply Cooperatives

Dept. of Agricultural Economics
Oregon State University
Corvallis, Oregon

Please fill in the following information for your cooperative:

1.	Number of competitors in your market area.	_____			
2.	Is any one farm supply firm, including your own, heavily dominant in your market area?				
	_____yes.	_____no.			
		<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
3.	Number of full time employees (Including management but not the board of directors)	_____	_____	_____	_____
4.	Sales (dollars)	_____	_____	_____	_____
5.	Total Assets (dollars)	_____	_____	_____	_____
6.	Current Assets (dollars)	_____	_____	_____	_____
7.	Other Assets (<u>leave blank</u>)	_____	_____	_____	_____
8.	Total Liabilities (dollars)	_____	_____	_____	_____
9.	Current Liabilities (dollars)	_____	_____	_____	_____
10.	Long-term Liabilities (<u>leave blank</u>)	_____	_____	_____	_____
11.	Net Margin or Loss (after taxes and all interest)	_____	_____	_____	_____
12.	Interest Paid on Members' Equity Certificates	_____	_____	_____	_____

Confidential

APPENDIX C. 1

PRIORITIES AND PERFORMANCE STUDY
FARM SUPPLY COOPERATIVESDept. of Agricultural Economics
Oregon State University
Corvallis, OregonANSWER THE FOLLOWING BY PLACING A CHECK MARK
IN THE APPROPRIATE BLANK.

1. One of the primary responsibilities your cooperative has to its members is to be among the first in the market area to provide a new product or service.

strongly disagree. disagree. agree. strongly agree. no opinion.

2. It is more important for your cooperative to serve the needs of farmers than to make a profit.

strongly disagree. disagree. agree. strongly agree. no opinion.

3. One of the primary responsibilities of a cooperative is to provide means for management and other employees to develop to their full potential.

strongly disagree. disagree. agree. strongly agree. no opinion.

4. The likely impact on the community should be a major consideration in decisions made by your cooperative.

strongly disagree. disagree. agree. strongly agree. no opinion.

5. To maintain high performance, your cooperative should periodically make extensive studies of possible lower cost ways of conducting various phases of the operation.

strongly disagree. disagree. agree. strongly agree. no opinion.

6. A primary objective of your cooperative should be to have substantial influence in its market area.

strongly disagree. disagree. agree. strongly agree. no opinion.

7. The success of your cooperative over the next few years will depend to a considerable extent on increasing total assets.

strongly disagree. disagree. agree. strongly agree. no opinion.

8. The cooperatives you consider to be well managed offer new products or services: (check one)

as soon as they learn of them
 after a few other companies have tried them successfully
 about the same time as most other companies
 after most other companies have tried them successfully

9. The profits made by your cooperative should be at least as high as those of a competitor whose business is privately owned and operated.

strongly disagree. disagree. agree. strongly agree. no opinion.

10. Providing means for members of the board of directors to develop to their full potential as board members is a primary responsibility of your cooperative.

strongly disagree. disagree. agree. strongly agree. no opinion.

11. Primarily for the good of the community, your cooperative should try to provide year-round employment for all its employees.

strongly disagree. disagree. agree. strongly agree. no opinion.

12. Credit should be granted only to those customers with good credit rating even though sales might be reduced as a consequence.

strongly disagree. disagree. agree. strongly agree. no opinion.

13. For the best service to the members, your cooperative must be large enough to have substantial bargaining strength with suppliers.

strongly disagree. disagree. agree. strongly agree. no opinion.

14. What do you view as the primary reason for major remodeling or additional capital investment in your cooperative over the next few years? (check one)

to facilitate expansion of sales
 to improve operating efficiency
 to replace old facilities or equipment
 to provide members a new product or service
 other (please specify) _____

IN THE FOLLOWING SECTION GIVE ANSWERS FOR ALL THREE GROUPS (BOARD OF DIRECTORS, MANAGEMENT, AND OTHER EMPLOYEES) BY PLACING CHECK MARKS IN THE APPROPRIATE BLANKS.

15. How important to the success of your cooperative are each of the following for the board of directors, management, and the other employees?

	Very Unim- <u>portant</u>	Unim- <u>portant</u>	No <u>Opinion</u>	<u>Important</u>	Very <u>Important</u>
<u>BOARD OF DIRECTORS:</u>					
Attendance of trade meetings, conventions, and conferences related to the cooperative's line of business.	_____	_____	_____	_____	_____
Having trade publications available.	_____	_____	_____	_____	_____
Attendance of seminars and training courses on the duties and responsibilities of a board member.	_____	_____	_____	_____	_____
Other (please specify) _____					

MANAGEMENT:

Attendance of trade meetings, conventions, and conferences related to the cooperative's line of business.	_____	_____	_____	_____	_____
Having trade publications available.	_____	_____	_____	_____	_____
Attendance of management training seminars and courses.	_____	_____	_____	_____	_____
Other (please specify) _____					

OTHER EMPLOYEES:

Attendance of technical training meetings.	_____	_____	_____	_____	_____
Well-developed employee evaluation program.	_____	_____	_____	_____	_____
Systematic employee development program.	_____	_____	_____	_____	_____
Employee participation in decision making.	_____	_____	_____	_____	_____
Attendance of trade meetings, conventions, and conferences related to the cooperative's line of business.	_____	_____	_____	_____	_____
Other (please specify) _____					

16. How important is it to your cooperative for the board of directors, management and other employees to be active in community affairs by participation in community organizations and activities?

	Very Unim- <u>portant</u>	Unim- <u>portant</u>	No <u>Opinion</u>	<u>Important</u>	Very <u>Important</u>
Board of Directors	_____	_____	_____	_____	_____
Management	_____	_____	_____	_____	_____
Other Employees	_____	_____	_____	_____	_____

ANSWER THE FOLLOWING BY PLACING A CHECK MARK IN THE APPROPRIATE BLANK.

17. Cooperatives generally should provide new products and services before they are available from noncooperatives.
 ___strongly disagree. ___disagree. ___agree. ___strongly agree. ___no opinion.
18. The most successful cooperatives over the next ten years will be the ones which emphasize profitability.
 ___strongly disagree. ___disagree. ___agree. ___strongly agree. ___no opinion.
19. Your cooperative should not expand if it would mean forcing a local competitor out of business.
 ___strongly disagree. ___disagree. ___agree. ___strongly agree. ___no opinion.
20. Your cooperative should not provide products and services to members if there is any chance doing so would adversely affect its ability to meet current financial obligations.
 ___strongly disagree. ___disagree. ___agree. ___strongly agree. ___no opinion.

21. Your cooperative should have substantial influence on the setting of prices in your market area.
 strongly disagree. disagree. agree. strongly agree. no opinion.
22. What total percent increase in sales volume do you feel is necessary for your cooperative to achieve over the next three years? (check one)
 less than 5%
 5-10%
 10-20%
 20-25%
 more than 25%
23. What total percent increase in assets do you feel is necessary for your cooperative to achieve over the next three years? (check one)
 less than 5%
 5-10%
 10-20%
 20-25%
 more than 25%
24. Constant attention to potential beneficial changes in operating procedures, policy, or means of finance are vitally necessary for the continued success of your cooperative.
 strongly disagree. disagree. agree. strongly agree. no opinion.
25. Your cooperative should generally provide only those products or services that are profitable.
 strongly disagree. disagree. agree. strongly agree. no opinion.
26. Your cooperative should not become involved in controversial community problems.
 strongly disagree. disagree. agree. strongly agree. no opinion.
27. Your cooperative should have a service charge for overdue accounts and give considerable attention to collecting accounts as soon as possible.
 strongly disagree. disagree. agree. strongly agree. no opinion.
28. It is important for your cooperative to be a leader in setting standards on the quality of products and services offered in your market area.
 strongly disagree. disagree. agree. strongly agree. no opinion.
29. The most effective board member of a cooperative is usually one who is innovative in his farming operation.
 strongly disagree. disagree. agree. strongly agree. no opinion.
30. Return on investment should be a major criteria when deciding whether or not your cooperative will provide a particular product or service.
 strongly disagree. disagree. agree. strongly agree. no opinion.

31. Your cooperative should carry large enough inventories to avoid occasionally being out of stock.
 strongly disagree. disagree. agree. strongly agree. no opinion.
32. Your cooperative should aggressively strive to maintain the largest possible share of sales in your market area.
 strongly disagree. disagree. agree. strongly agree. no opinion.
33. Which farms should cooperatives place primary emphasis on serving? (check one)
 larger farms
 the average, "typical" farm
 smaller and part-time farms
 all farms

34. What do you feel are the two most important things for your cooperative to accomplish over the next five years?

(1) _____

(2) _____

THE BOARD OF DIRECTORS OF A COOPERATIVE RECENTLY HELD A REGULARLY SCHEDULED BOARD MEETING DURING WHICH A NUMBER OF PROPOSALS WERE MADE. EACH PROPOSAL IS SUPPORTED BY SOME DIRECTORS AND OPPOSED BY OTHERS. FOR EACH OF THE FOLLOWING PROPOSALS, PLEASE INDICATE IF YOU AGREE OR DISAGREE BY PLACING A CHECK MARK IN THE APPROPRIATE BLANK.

35. One suggestion was to provide some financial support for a major youth group in the community. Some of the directors were opposed because they felt the cooperative should not spend the farmers' money in this way. However, others felt this type of activity is important and the cooperative as an organization should support it.
 Do you agree or disagree that the cooperative should help support the youth group?
 strongly disagree. disagree. agree. strongly agree. no opinion.
36. Next, a suggestion was made that the cooperative become more aggressive in selling to nonmembers. It had become apparent in recent years that this is a primary means of increasing profits. Those in support of this idea felt any profits are to the benefit of the members, regardless of source. Those who opposed felt the cooperative should concentrate heavily on serving only members, even if it means lower profits.
 Do you agree or disagree that the cooperative should more aggressively sell to nonmembers to increase profits?
 strongly disagree. disagree. agree. strongly agree. no opinion.

37. Discussed next was the possibility of the cooperative introducing a new service to the area. Some directors felt the cooperative should go ahead with the service even though it had not yet been offered by anyone else in the area. Others felt the cooperative should wait until some other business in the area offers the service so they can see how well it will be accepted by farmers.

Do you agree or disagree that the cooperative should go ahead and introduce the service?

strongly disagree. disagree. agree. strongly agree. no opinion.

38. Since warehouse space and other physical facilities are presently being used at near capacity, plans were considered for a major building program. A heavy debt load would have to be undertaken which would be no problem if sales increase as expected. However, some directors opposed the building program because they felt due to possible bad crop years or some other reason, sales might not increase as expected. Others felt the need for expansion was important enough to support it.

Do you agree or disagree that the building program should be undertaken?

strongly disagree. disagree. agree. strongly agree. no opinion.

39. The cooperative's last five years have been its most successful, with an increase in both profits and volume of business. However, it has been brought to the attention of the board that the cooperative is not performing some operations in the best possible way. For example, where one man should be unloading a truck, two are doing it. Some of the directors felt the cooperative may soon be in serious trouble if such operating procedures continue. Another group believes the present success of the cooperative is proof enough things are being done satisfactorily and the operation should not be tampered with.

Do you agree or disagree that the cooperative should make a close examination of operating procedures?

strongly disagree. disagree. agree. strongly agree. no opinion.

40. The cooperative has enjoyed large profits and, in addition, has grown to be the largest farm supply business in the area. However, one of the competitors, a smaller, well-respected private business, is the most influential, particularly in establishing prices in the area. Although the cooperative is doing well, some of the board members felt long-run success will suffer because the cooperative is not "running" things. They propose to take action to increase the cooperative's market influence in the future.

Do you agree or disagree with taking action to increase the market influence of the cooperative?

strongly disagree. disagree. agree. strongly agree. no opinion.

41. The final subject the board considered was whether or not to send the general manager to a week long management training seminar at a major university noted for its management training courses. This particular seminar will involve management practices as well as current information about the future of farm cooperatives. The directors who oppose sending the manager felt management practices concerning their business can best be learned by experience. Others felt management must occasionally attend such seminars to keep up with new ideas and concepts of possible use to the cooperative.

Do you agree or disagree with sending the general manager to the management training seminar?

strongly disagree. disagree. agree. strongly agree. no opinion.

APPENDIX TABLE C.2. Objective Motivation Questions In Each Objective Area

Objective Areas	Questions Used in the Objective Areas
Innovation	1-8-14-17-24-29-34-37
Profitability	2-9-18-25-30-34-36
Employee Performance and Development	3-10-15-34-41
Community Citizenship	4-11-16-19-26-34-35
Efficiency	5-12-14-20-27-31-34-39
Competitive Power	6-13-21-28-32-34-40
Growth	7-12-14-19-22-23-34-38

APPENDIX TABLE D. Market Structure Variables.

Cooperative	Number of Competitors	Largest Percent Share of the Market Held By Any Business Competing in the Cooperatives' Main Product Line
1	7	70
2	4	50
3	4	50
4	18	40
5	3	50
6	20	30
7	10	25
8	4	33
9	3	25
10	3	35
11	20	20
12	18	20
13	15	85
14	6	40
15	7	33
16	12	55
17	6	35
18	15	10
19	4	55
20	4	50
21	5	30

APPENDIX TABLE E.1. Simple Correlation Coefficients Between Top Managements' Objective Motivations

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	-.208	.428	.390	.123	.254	-.161
Profitability		1.000	-.013	-.346	.180	.121	.386
Employee Performance and Development			1.000	.367	.462	.450	-.071
Community Citizenship				1.000	.181	.294	-.302
Efficiency					1.000	.213	-.329
Competitive Power						1.000	-.037
Growth							1.000

APPENDIX TABLE E.2. Simple Correlation Coefficients Between Key Employees' Objective Motivations

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	.173	.379	.245	-.435	.352	-.175
Profitability		1.000	.299	-.046	-.037	.368	-.210
Employee Performance and Development			1.000	-.062	-.142	.318	.287
Community Citizenship				1.000	-.510	.433	-.494
Efficiency					1.000	.064	.360
Competitive Power						1.000	-.084
Growth							1.000

APPENDIX TABLE E.3. Simple Correlation Coefficients Between the Board of Directors' Objective Motivations

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	.107	.057	.083	.465	.424	.202
Profitability		1.000	-.121	-.066	.098	-.170	-.258
Employee Performance and Development			1.000	.481	.370	.245	-.078
Community Citizenship				1.000	.054	.011	.016
Efficiency					1.000	.488	-.056
Competitive Power						1.000	.396
Growth							1.000

APPENDIX TABLE E.4. Simple Correlation Coefficients Between Corporate Objective Motivations

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	.027	.330	.329	.319	.394	-.106
Profitability		1.000	.096	-.236	.216	.207	.068
Employee Performance and Development			1.000	.444	.508	.445	.042
Community Citizenship				1.000	.090	.255	-.296
Efficiency					1.000	.424	-.294
Competitive Power						1.000	-.036
Growth							1.000

APPENDIX TABLE E. 5. Simple Correlation Coefficients Between Objective Motivation Conformities for Key Employees

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	.713	.734	.732	.540	.585	.736
Profitability		1.000	.626	.682	.548	.521	.639
Employee Performance and Development			1.000	.863	.703	.551	.673
Community Citizenship				1.000	.670	.570	.695
Efficiency					1.000	.366	.543
Competitive Power						1.000	.875
Growth							1.000

APPENDIX TABLE E. 6. Simple Correlation Coefficients Between Objective Motivation Conformities for the Board of Directors

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	.146	.142	-.258	.050	.665	.073
Profitability		1.000	-.070	.065	.030	.230	-.032
Employee Performance and Development			1.000	.363	.070	-.118	-.436
Community Citizenship				1.000	-.043	-.461	-.046
Efficiency					1.000	-.021	.309
Competitive Power						1.000	.008
Growth							1.000

APPENDIX TABLE E.7. Simple Correlation Coefficients Between Objective Motivation Conformities Among Power Centers

	Innovation	Profitability	Employee Performance and Development	Community Citizenship	Efficiency	Competitive Power	Growth
Innovation	1.000	-.097	.388	.139	.548	.348	.106
Profitability		1.000	-.306	.011	.008	.083	.000
Employee Performance and Development			1.000	.081	.159	.255	.144
Community Citizenship				1.000	.332	.393	.484
Efficiency					1.000	.030	.115
Competitive Power						1.000	.463
Growth							1.000