August 21, 1957

To the Graduate Council:

I am submitting herewith a thesis written by J. Thomas Romans entitled "Knowledge and Attitudes of Tennessee Farmers Concerning Credit Practices and Some Effects on Credit Management and Credit Cost." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Economics.

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KNOWLEDGE AND ATTITUDES OF TENNESSEE FARMERS CONCERNING CREDIT PRACTICES AND SOME EFFECTS ON CREDIT MANAGEMENT AND CREDIT COST

A THESIS

Submitted to
The Graduate Council
of
The University of Tennessee
in
Partial Fulfillment of the Requirements
for the degree of
Master of Science

---

by

J. Thomas Romans

December 1957

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CHAPTER I

THE PROBLEM OF THE STUDY

Introduction

Through knowledge man has been able to control and exploit his environment to meet his own purposes, and thus, multiply the benefits of his labor many times.

This study is devoted to a small but significant segment of man's social, economic, and political endeavors. Knowledge of his credit opportunities can advance a farmer far on the road of economic advancement, while inadequate knowledge of these opportunities can greatly hinder if not absolutely prohibit this advancement.

Strategic to any study of knowledge are the attitudes and opinions which are associated with knowledge. Attitudes and opinions may or may not be beliefs of knowledge. If they are knowledge, then the actions which result from them are contributory to man's economic and social betterment. But if these beliefs are disingenuous, if they do not include, consist of, and apply knowledge, then the resulting actions are regressive and may eventuate in debacle and bankruptcy.

The Purpose of the Study

This study was initiated through the belief that Tennessee farmers were not acting in the credit market to their best advantage. It is

believed that farmers have too negative attitudes and inadequate knowledge about credit to make optimum use of it as a productive tool.

In the investigation of this belief, five hypotheses were set up to be tested.

Hypothesis I

A farmer's actions in the credit market are determined by his attitudes, opinions, knowledge, and deliberation about credit. They are further determined by such factors as:

(1) Age
(2) Educational level
(3) Size of farm
(4) Tenure status
(5) Type of farm
(6) Location in state
(7) Amount of off-farm income

The definitions and conceptual role of attitudes, opinions, knowledge, and deliberation will be presented in Chapter II. As important as these factors, however, are the environmental factors which interact with these conceptual beliefs and determine credit action. The seven environmental characteristics listed above are deemed of sufficient importance in their influence on the conceptual beliefs and on credit action directly to merit investigation.

Age would appear to be of importance, because older farmers have had longer and more varied experience than younger farmers, and one would expect them to have evolved somewhat different attitudes toward credit use than younger farmers. Also, as farmers grow older the goal of retirement replaces the goal of farm expansion, and older farmers probably do not have as much interest or desire to borrow.

The benefits of education should not only furnish an increased awareness of the productiveness and usefulness of credit but should also train mental abilities toward making better and more deliberative decisions. Education should affect farmers' knowledge, attitudes, and deliberation about credit.

Farmers operating farms under different tenure statuses should vary in their need and use of credit as well as in the volume of credit available to them. Also, because of the environmental characteristics of any tenure situation, the tenure status of farmers should be closely associated with credit knowledge and attitudes.

A similar situation would exist with the size of farm. The operators of large farms have more expanded credit opportunities and more credit available to them than do the operators of small farms. On the other hand, those farmers on small farms may have proportionately greater financial pressures both in the family and on the farm.

Farmers on different types of farms may have different credit needs and use different amounts of it. Farms which are predominately crop enterprises will have greater seasonal peaks in farm expenses and income. They may have a larger need for credit to meet these seasonal peaks.

There exists in Tennessee significant cultural, topographical, and agricultural differences between the three major areas of the state; East, Middle, and West. It is thought that there not only exists differences in credit needs and use between the areas but also differences in attitudes, knowledge, and deliberation about credit. East Tennesseans, it is believed, are of more conservative stock, have less positive attitudes toward credit, and use less of it.

There are a considerable number of part-time farmers in all areas of the state, especially in counties adjacent to metropolitan areas. This factor is considered important because of the possible lack of interest of small part-time farmers in farm credit or in the expansion of their farm businesses through credit.

Hypothesis II

The areas of attitudes which are most influential in farmer decisions regarding whether to borrow or not to borrow are:

(1) Credit social stigmas
(2) Attitudes toward change
(3) Conceptions of risk

Large scale commercial farming utilizing large amounts of both short and long-term credit is a relatively new phenomenon in American agriculture, particularly in certain sections of the South. Previous to this era of commercial farming, many attitudes developed which restricted both credit knowledge and credit use. These attitudes developed as a result of credit abuses, inadequate controls on the credit market, and ignorance regarding the use and productivity of credit.

There may be many attitudes, still common among farmers and non-farmers alike, which prohibit the fullest use of credit as a productive tool. Perhaps there remains some social stigma attached to credit. Some Tennessee farmers, it is believed, associate indebtedness with poor management and a lack of thrift. Such a stigma may not only stop many farmers from making the fullest use of their available credit, but also could deter many from talking with neighbors and credit people so as to

become better informed about credit. Credit is often considered secretive and personal and outside of the general business affairs of the farm.

Farmer conservatism also seems to play a role in loan decision making. Many farmers find it difficult to break away from traditional ideas and practices. A significant number of these traditional ideas and practices are neither practical or applicable to the present loan market. A misuse of credit can conceivably result in disaster and loss of farm through bankruptcy. As traditional ideas and practices are usually considered safer than new ideas and practices, farmers may tend to be extremely conservative in the adoption of new credit practices and in their actions in the loan market.

It appears that farmers evaluate the risk factor out of proportion to its importance. The intelligent use of credit does not necessarily increase the risk of farming. In those isolated instances where a farmer does suffer bankruptcy and the loss of his farm, the incident becomes widely known not because such bankruptcy is the rule, but because it is the exception. Many such cases are undoubtedly a result of poor farming practices outside as well as within the field of credit management.

Hypothesis III

Farmers have little knowledge and/or do little deliberation about the:

(1) Range of credit sources available to them
(2) Practices, policies, and types of credit offered by the various sources

Many sources are relatively new and their practices, policies, and types of credit offered change frequently. Also, many of the loan sources

with the lower interest rates do little advertising, while those lenders who have the least attractive product to offer do considerable advertising. It is believed that many farmers have too little information on their credit alternatives to make an intelligent credit source selection.

Some farmers have the necessary information available to them but do not appear to use it. It is believed that most decisions of loan source selection are non-deliberative and habitual in nature. Habitual decisions are probably the result of a deliberative decision sometime in the past and a continuation of the practice. Also, negative attitudes result in little search for information on loan sources, and if and when a loan is ever desired, there is little knowledge of the available alternatives. Those farmers who conceive of credit as an emergency stop-gap rather than as a productive tool probably have little knowledge of credit sources. In such cases should an emergency arise, an irrational and uninformed credit source selection is likely to be made.

Only when a farmer has knowledge of a range of farm credit sources and the practices, policies, and types of credit offered by each, can he make the best possible loan for his purposes. Not to recognize these factors may subject him to exorbitant interest rates, the non-use of the safer and more reliable sources, and the non-use of the more economical and purposeful credit types and terms.

Hypothesis IV

Farmers have little general knowledge about the:

(1) Varying purposes for which credit may be obtained
(2) Economic and productive aspects of credit
(3) Credit terms: Calculation of interest rates, collateral requirements, repayment plans, etc.

In past generations little credit was used on the farm and credit knowledge was neither needed or learned. Farm capital needs were not great and many of the present farm credit agencies were not in existence. Similar to the situation with attitudes, much of the knowledge of credit and other economic phenomena which was applicable to an earlier era is not a realistic formulation of the agricultural economy of today.

The farm loan market is not a static structure. If farmers keep informed of its changes, if they understand the overall purpose of credit and the purposes for which it may be obtained, if they recognize the great diversity of credit agencies which are available to them, if they understand the calculation of interest rates and service charges, if they realize the variation in cost of credit between institutions and comprehend collateral and repayment requirements and other loan terms, then and only then is it possible for farmers to make intelligent credit decisions. Not to recognize these factors may result in sacrificed farm expansion and income, the use of wrong types of credit for one's purposes, the effects of gullibility to overly persuasive and unethical lenders, and excessive risk through uninformed credit decisions.

Economic opportunities and potentials exist for farmers only as farmers have knowledge of their existence. In addition to this, imperfect knowledge also decreases the elasticity of the credit demand curve for each firm, resulting in a more highly monopolistic market for lenders. Thus, it is to a farmer's advantage not only to have a sound knowledge of his credit opportunities, but for his neighbors to have this

same knowledge; for widespread knowledge creates bargaining power for the purchaser, as it forces competition upon the seller.

Hypothesis V

The main factors which farmers value and consider in the selection of a credit source are:

(1) Interest rate
(2) Amounts offered in relation to collateral ("external capital rationing")
(3) Repayment period
(4) "Red tape"
(5) Lender supervision
(6) Flexibility of terms
(7) Personal relationships
(8) Convenience of location

Farmers, it is believed, are not utilizing their most economical credit alternatives, possibly because many patronize credit sources for non-economic reasons even when knowledge of the price and terms is present. When farmers make somewhat regular purchases of a certain type of product, they often do not buy on a basis of price or on an evaluation of the other terms of the transaction. They may often trade with the merchants with whom they are acquainted and most friendly.

This may be especially true when it is small businesses with which they are dealing. In the farm credit market, non-economic considerations are important because of the mutual trust involved in any credit transaction. Where friendship is the reason for patronizing a particular credit source, a buyer may not recognize price differences and would think a 2 or 3 per cent lower interest rate negligible if he did. Farmers could easily be overly trustful of their lenders and make no inquiry into the loan terms.

A farmer may be resistant to changing his credit source for this reason, and also because he may dislike discussing his "personal" credit affairs with strangers. There may be many attitudes, common among farmers and nonfarmers alike, which prohibit the selection of the best credit sources for their purposes. Non-economic values may be of prime importance in the selection of credit sources.

Objectives of the Study

The seriousness of the problems and the validity of the relationships as posed above are still largely a matter of conjecture. Present statistics deal largely with types and amounts of credit used and the productivity of capital in various uses, and not with the reasons for the extent and pattern of use. This study will provide evidence regarding how, in what manner, and to what extent farmers' attitudes, knowledge, and deliberation influence their use of credit. The scope of the study excludes any analysis of farmers' credit requirements or the profitability of credit in alternative uses.

Identification of strategic factors affecting credit management by farmers may enable lenders to gear their lending programs better to the demands and attitudes of farmers. A basis for evaluating the need for education in the use of credit and for identifying weaknesses in existing educational programs dealing with credit should also be provided by this study. Farmers should be further benefited by having available information with which to analyze intelligently their own credit practices.

In summary, the hypotheses above can be restated in terms of the objectives and scope of the study. With the universe the farmers in Tennessee, the objectives are:

(1) To determine the comparative influences of credit attitudes, knowledge, deliberation, and their associated environmental characteristics on credit action.

(2) To determine the specific attitudes which are most influential in farmer credit decisions.

(3) To determine the extent to which farmers make deliberative decisions and have knowledge about the range of sources available to them and the practices, policies, and types of credit offered by these sources.

(4) To determine the extent to which farmers have knowledge of the purposes of credit, the economic and productive aspects of credit, and the meaning of the varying types of credit terms offered.

(5) To determine the factors which farmers value and consider in their selection of a credit source.

The Importance of Credit in the Farm Economy

To the borrower of money a loan is debt, to the lender it is credit. Our moral standards put a premium on savings and a stigma on debt. This is done even though debt plays an economic role so important that our economic system is sometimes called a "credit economy".

Credit plays many roles in the economy. Through checking operations, charge accounts, and loans it vastly reduces the amount of paper and coined money which is needed to carry on the business of the country. Even currency itself is credit as it is a promise to pay by the Federal Reserve Bank or the United States Treasury. Debt is not parasitic to the

economy nor is it simply a case of people "living over their means". Ninety per cent (by value) of all business in the American economy is carried on by credit.[1]

As the national product of a country rises it results in increased welfare and/or increased wealth. Algebraically:

National Product = Consumption plus Savings (or Investment)

Decreasing either consumption or investment, however, does not necessarily cause an increase in the other. It may result in a lower national product through the creation of unemployment.

Thus, the paradox of thrift is formed. The good aspect of savings and thrift is that it is an accumulation of wealth and the capacity for future consumption. The bad aspect is that thrift is not spent for consumption, does not contribute to immediate welfare, and may create idleness and unemployment of resources.

In order to be productive, however, savings must be transferred to the investment (or consumption) sectors of the economy. This is necessary to prevent the unemployment which can result from hoarded savings. One method of this transference is credit, and if savings are to continue to have a high moral value, they must be accompanied by a highly advanced credit system. Through debt creation, a large part of the capital in unproductive sources can move into productive uses. By the use of production credit savings can be channeled to investment, and by consumption

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[1]Ralph H. Blodgett, Principles of Economics (3rd ed.; New York: Rinehart and Company, Inc., 1951), p. 491.

credit channeled to consumption. Both result in an increased national product.

Consumption credit enables people to space their consumption through time. It enables a person to pattern his consumption to meet his consumption needs. He is able through credit to make those large purchases at the time when he needs them and before the time he could otherwise pay for them. The pattern of income through a person's life span rarely follows the pattern of his consumption needs.

Thus, if the use or non-use of consumption credit was purely a problem of economic values, the decision would be made by the answering of the following question: Is the additional time for which a person has the use of the item to be purchased worth the associated interest charges and the risk of unpredictable future income, assuming expected future income is sufficient to pay for the item? However, there are non-economic values involved. Concepts of ownership, independence, and security seem to be especially important in credit-use decisions.

Productive processes are also facilitated by credit. As productive processes require both capital and time, credit is a major source of production financing. Farming, as well as many other types of business, has high seasonal requirements of capital. Through short-term credit entrepreneurs are able to procure sufficient capital to meet these seasonal peaks at minimum cost.

Through high off-farm migration, the capital organization of agriculture is constantly disrupted, and many farm operators are left

with insufficient capital to efficiently operate their farms. If a farmer's capital received from inheritance, savings, and possibly rental is not adequate to support an efficient operation, credit is his only other source of capital. Thus, credit can allow many to operate who could not operate otherwise and for others can furnish the capital which is essential for rapid expansion and progress. The deciding question for the use or non-use of production credit should be: Will the returns on the credit investment be sufficient to both pay the interest charges and allow a sufficient profit margin to account for the risk factor?

For a farmer or other businessman not to recognize the functions of credit means not taking advantage of the income opportunities it creates and is, in most cases, a failure to carry on his business in the most advantageous manner. When a farmer does not use credit at the point where marginal credit cost equals marginal revenue received, he does not operate at the point of maximum profit. By greater or lesser borrowing, profits could be increased.

It should be mentioned, however, that to utilize credit past this point is to commit a managerial sin as great as if credit is used in amounts not to reach this point. And because of variable prices, unpredictable weather, and practically unlimited merchant installment credit, it is relatively easy for the unwary or uninformed farmer to borrow past the point of maximum profit and toward the point of bankruptcy.

Procedures and Sources of Data

Few studies have been done in the field of the psychology of farmers' credit actions. Those that have been done were limited to the small portion of the problem involving preferences of specific loan sources and practices.

In order to procure data which would verify the hypotheses listed above, it was decided to conduct a survey of Tennessee farmers. This involved the selection of a sample of farmers to be interviewed and the construction of a questionnaire which would get at the desired information.

The Sample

The sampling universe was the ninety-one rural counties in Tennessee.[2] The census definition of a farm was used in order to furnish a basis for a proportional sampling procedure.[3]

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[2]The four urban counties of Shelby (Memphis), Davidson (Nashville), Hamilton (Chattanooga), and Knox (Knoxville), were excluded from the study. These counties are composed mostly of part-time farmers to whom this study was not primarily directed and whose urban influence, if included in the study, would greatly increase the variance of the universe and decrease the sampling precision in the more important rural counties.

[3]"A Farm. - For the 1954 Census of Agriculture, places of 3 or more acres were counted as farms if the annual value of agricultural products, exclusive of home-garden products, amounted to $150 or more. The agricultural products could have been either for home use or for sale. Places of less than 3 acres were counted as farms only if the annual value of sales of agricultural products amounted to $150 or more. Places for which the value of agricultural products for 1954 was less than these minima because of crop failure or other unusual conditions, and places operated at the time of the Census for the first time were counted as farms if normally they could be expected to produce these minimum quantities of agricultural products." U. S. Bureau of Census, 1954 Census of Agriculture, Vol. 3-pt. 8 (Washington: Government Printing Office, 1956), p. VII.

The sample was stratified by means of cross-classifying the counties on a chart by:

(1) Average total sales per farm

(2) Per cent of total sales from crops

(3) Location in East, Middle, or West Tennessee

The counties were then delineated into twelve somewhat homogeneous areas, and one county was randomly selected from each of the twelve areas through the use of a table of random numbers. The sampling areas and sampling counties are shown in Plate 1. Statistical tests were used to determine minimum precision at various sample sizes, and a sample size of 500 was decided upon.

Three strata covering the number of harvested acres per farm were then set up, and from 1954 census data the numbers of farms by counties were computed and added to make the sample proportional to the universe.[4] By this stratified random sampling procedure the sample and the universe were then proportional in:

(1) Acreage strata within the areas

(2) Area strata within East, Middle, and West Tennessee

(3) East, Middle and West Tennessee regions within the state

This procedure allowed census checks on the final results by the simple multiplication of a constant.[5] Within the counties, farmers were selected

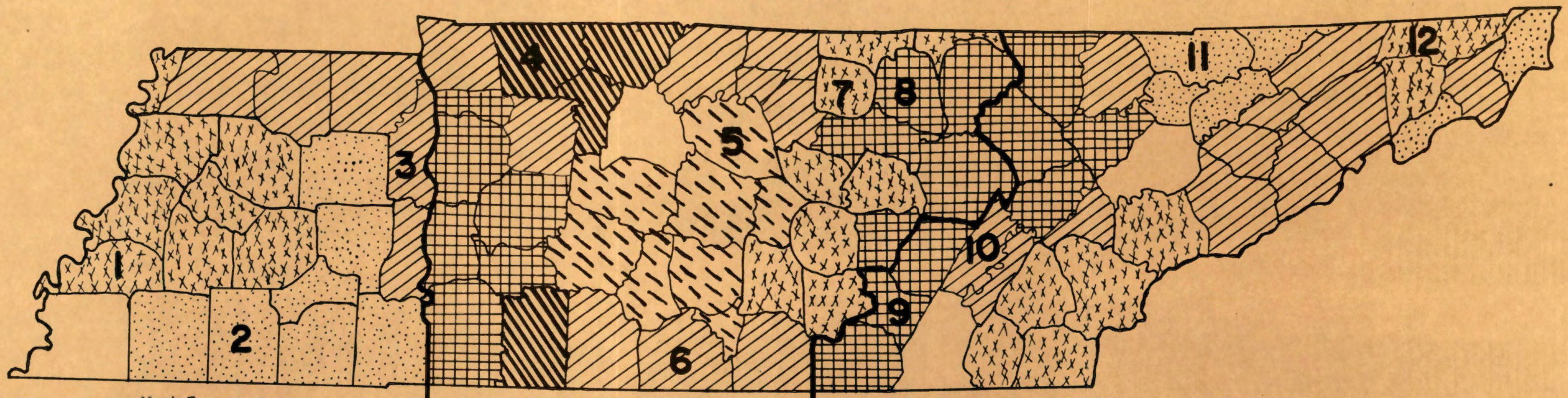
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[4]The three acreage strata within the counties were based on the number of harvested acres in the preceding crop year: Small, 0-9 acres; medium, 10-49 acres; large, 50 acres or more.

[5]In this sample design, 380.2.

PLATE I

SAMPLING AREAS AND COUNTIES[a]



West Tennessee

Area One: Sample county, Tipton; high percentage of crops, high sales (70 farmers).

Area Two: Sample county, Hardeman; high percentage of crops, low-medium sales (49 farmers).

Area Three: Sample county, Benton; medium percentage of crops, low-medium sales (31 farmers).

Middle Tennessee

Area Four: Sample county, Montgomery; high percentage of crops, medium-high sales (26 farmers).

Area Five: Sample county, Wilson; low-medium percentage of crops, high sales (48 farmers).

Area Six: Sample county, Lincoln; medium percentage of crops, medium sales (53 farmers).

Area Seven: Sample county, Jackson; low-medium percentage of crops, low-medium sales (31 farmers).

Area Eight: Sample county, Overton; low-medium percentage of crops, low sales (32 farmers).

East Tennessee

Area Nine: Sample county, Sequatchie; low percentage of crops, low-medium sales (18 farmers).

Area Ten: Sample county, Rhea; medium percentage of crops, medium sales (66 farmers).

Area Eleven: Sample county, Claiborne; high percentage of crops, low sales (28 farmers).

Area Twelve: Sample county, Sullivan; medium percentage of crops, medium sales (48 farmers).

[a]The counties which have numbers inserted are the sample counties which were randomly selected from each sample area. In the construction of the sample areas, the strata limits were as follows: Percentage of crops; low, 0-35 per cent; medium, 36-55 per cent; high, over 55 per cent. Gross sales per farm; low, 0-$1000; medium, $1000-$1700; high, over $1700. The figures in parentheses are the numbers of farmers which were selected from each county to make the total 500 sample size.

by interviewing every farmer in randomly selected square mile blocks until the quota of farms for each of the acreage strata in the county was filled.

Construction of the Knowledge Scale

A measure was desired which would appraise farmers' knowledge of credit source alternatives, and a scale, based on rationale typically used in the construction of intelligence scales, was constructed.[6]

A questionnaire consisting of sixty-eight questions on the location, interest rates, terms, and other loan criteria of the major credit sources was tested through personal interview with forty-nine farmers in East, Middle, and West Tennessee. Sixty-eight biserial correlations were then constructed between the total scores farmers made on the sixty-eight question test and the correctness (yes or no) of their answers to each question. This was done in order to determine the strength each question had in the placing of farmers on a scale.

The questions with the highest coefficients of correlation with the total were then selected to be used in a twenty point scale. In cases where the coefficients of correlation were roughly equal, the question was chosen which by observation seemed independently the most functional. It was believed that this method of selecting questions for a necessarily short scale could give the scale strength and discrimination it could never have without such field testing and statistical support.

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[6]Allen L. Edwards, Statistical Analysis for Students in Psychology and Education (New York: Rinehart and Company, Inc., 1946), pp. 112-116.

Construction of the Questionnaire

To determine the specific problem areas within the overall problem of attitudes about credit, informal interviews were made with farmers, bankers, credit agents, and merchants. Questionnaires were then constructed and revised while intermittently being tested on fifty farmers in East and West Tennessee. The testing was done mainly to determine the pertinence of the subject matter to the problem, the form of questions used, and the wording of the questions. Three questionnaires were constructed to be used in the final survey. A main set of questions was to be asked to all farmers. A second questionnaire was to be asked for every loan a farmer had outstanding at the time of interview. A third questionnaire was to be asked for every loan a farmer had repaid within the preceding three-year period.

Collection of Data

The data was collected by personal interview with 500 farmers between August, 1956 and March, 1957. Eighty per cent of the interviewing was done by the writer and 20 per cent by another full-time interviewer who was familiar with the technique and purpose of the study and who aided in the construction and testing of the questionnaire.

Analysis of Data

The explanatory answers to the open ended questions on the questionnaire were listed and categories were constructed. These categories were made as mutually exclusive as was possible. In order to reduce the bias in classifying each answer into one of the established categories,

every answer was independently classified by two people, and in those instances where disagreement arose, a third person made the deciding classification. The three persons involved were all familiar with the study.

In the analyses of the data and construction of tables, IBM calculating machines were used. The questionnaires were coded and the information coded was punched into IBM cards. All analyses and tables presented in this paper were derived from IBM procedures.

CHAPTER II

CONCEPTUAL FRAMEWORK AND DEFINITION OF TERMS

Introduction

If the actions of farmers in the credit market are to be understood, it is necessary to understand the conceptual functions of the beliefs which determine those actions. In this chapter a conceptual framework of the decision making process will be proposed and the terms used therein will be defined.

The first section of this chapter is directed at the meaning and definition of attitudes and opinions. The second section surveys the existing definitions and theories of knowledge and proposes one for use in this paper. The third section explains the functions and roles of these concepts in the decision making process. The functional indices and scales used to measure these concepts will be presented in the fourth section.

Definitions of Beliefs, Attitudes, Values, and Opinions

The earliest work on attitudes was done by Sigmund Freud who concluded that attitudes were the result of "inner motivational dynamics" and the "upheavals and vicissitudes of the impulsive life." He conceived

of attitudes as springing from inner frustrations and not from external environmental problems.[1]

Present day psychologists reject this and believe attitudes come from the environment and are molded and adjusted in the personality. Krech and Crutchfield define an attitude as "an enduring organization of motivational, emotional, perceptual, and cognitive processes with some aspect of the individual's world". Attitude formation and maintenance are a mere extension of motivation, emotion, perception, and cognition.[2]

Smith, Bruner, and White make a similar definition of an attitude. They conceive of an attitude as:

> A predisposition to experience a class of objects in certain ways with characteristic affect; to be motivated by this class of objects in certain ways; and to act with respect to these objects in a characteristic fashion. In brief, an attitude is a predisposition to experience, to be motivated by, and to act toward, a class of objects in a predictable manner.
>
> Attitude, opinion, sentiment--all of these terms refer to the kind of predisposition we have in mind. The permanence of such a predisposition is less a problem of definition than of measurement . . . we do not think the time is right to be theoretically solemn about the definition of an attitude. Definitions are matters of convenience, and they gain high status only in the advanced stages of a science. In time, greater precision will come. In the meantime we think that little is served about quarreling about definition in the abstract.[3]

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[1]M. Brewster Smith, Jerome S. Bruner, Robert S. White, Opinions and Personality (New York: John Wiley and Sons, Inc., 1956), p. 42.

[2]David Krech and Richard S. Crutchfield, Theory and Problems of Social Psychology (New York: McGraw-Hill Book Co., 1948), p. 152.

[3]Smith, Bruner, and White, op. cit., p. 33.

The definitions to be proposed below agree with the definitions of Krech and Crutchfield and Smith, Bruner, and White. Attitudes and opinions are formed by the joint interaction of a person with his environment. However, in the definition to be proposed an attempt will be made to distinguish between attitudes and opinions and to better delineate the effects of attitudes and opinions upon action.

A belief is defined in this paper as a conceptual recognition of experience or formulation of fact. It is through beliefs that a person records his experience as he conceives it, which is not necessarily as it actually happened.

Attitudes and opinions are both beliefs. However, they are different from each other in that an attitude involves an evaluation and is a predisposition for action. An opinion is a non-evaluating belief and is neutral in its orientation toward action by the holder.

An opinion can form and rate a relationship for its validity, but only an attitude can evaluate importance and relevance to a problem. An attitude evaluates personal desirability or favorableness. An opinion merely reflects the dependability of the relationships and in no sense evaluates the relationship as being good or bad. The orientation of this evaluative aspect of attitudes as either favorable or unfavorable is called the object value characteristic of the attitude.

These conceptions are interconnected and interdependent. Attitudes through their determination of deliberation and action select those experiences to be conceptualized in opinion and belief. Opinions serve as the base for attitudes and are evaluated by attitudes.

Attitudes not only evaluate and cause the formation of opinions, but they also rank subsequent attitudes and opinions. As this process continues and builds on itself and an attitude becomes highly organized and interconnected with other beliefs, this attitude becomes a value.

A value is a highly organized, strong, and durable attitude with great influence on conduct and action. Thus, differences between attitudes and values are differences of degree. They are on the same continuum.

Definition of Knowledge

A belief was defined as a "conceptual recognition of experience or formulation of fact". In other words a belief is a conceptual recognition and formulation of "knowledge".

But what is knowledge? And how does one know when a belief actually is knowledge?

There is not space in this paper to extensively survey the theories of knowledge which have been advanced as answers to these questions. Nor is there space to extensively justify the definitions which will be used in this paper. However, a brief survey and discussion of the existing theories is necessary and in order if the conceptual framework of this paper is to have a purposive function in explaining the decision making process as applied to credit problems.

An acceptable theory of knowledge has been of concern to philosophers from time immemorial. Many theories have been advanced and discarded, and today wide schisms still exist between philosophers on the meaning of "knowledge".

The difficulties in propounding a definition of knowledge lie in the difficulty of finding a starting point on which to base such a definition, for an adequate definition of knowledge would itself be knowledge and subject to its own definition. To this degree circularity exists in all existing definitions of knowledge.

Bertrand Russell points up another problem of knowledge definition of concern to many modern philosophers.

> . . . Knowledge is a vague concept for two reasons. First, because the meaning of a word is always more or less vague except in logic and pure mathematics; and second because all that we count as knowledge is in a greater or lesser degree uncertain and there is no way of deciding how much uncertainty makes a belief unworthy to be called "knowledge," any more than how much loss of hair makes a man bald.[4]

The earliest theories of knowledge rejected this uncertainty and evolved around an absolute truth, the truth being grounded in some indisputable metaphysical context. Such theories have been durable and adaptations of them still exist today, the one most commonly accepted being the dogma of divine revelation.

The Greek philosophers, the rationalists, propounded theories of knowledge based purely on the mental gymnastics of logic and inference. Empirical and even perceptual informational support was discarded as being too undignified for use in an intellectual pursuit of knowledge. The rationalists did not believe that knowledge could be found from observation

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[4]Bertrand Russell, Human Knowledge: Its Scope and Limits (New York: Simon and Schuster, Inc., 1948), p. 98.

or in experience. They conceived truth and knowledge as evolving purely from mental processes of rationalization. The Greek philosophy was a durable one and variations of it exist today. Rationalism, the theory that the criterion of truth is intellectual rather than sensory, was propounded again in the seventeenth century by Descartes, Leibnez, and Spinoza.

But in the early eighteenth century two theories arose in opposition. The first was empiricism which was proposed in variations by Locke, Berkeley, and Hume. The empiricists believe that all knowledge was derived from perceptual experience and observation. Evolving from empiricism came positivism (or "scientific empiricism"). Positivism is the theory that "knowledge describes phenomena and metaphysics is largely meaningless".[5] It differs from empiricism in that it applies scholasticism to experience, and thus, is not as anti-metaphysical as empiricism. Locke and Berkely had abolished all metaphysical or rational concepts and restricted knowledge to "the field of pure science as presented in sensation and elaborated by reflection".[6]

The first major objections to the empiricists and the positivists came from Kant and Hegel. They objected to the purely descriptive functions of empiricism and positivism and attempted to apply to them an

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[5]Hector Hawton, Philosophy for Pleasure (New York: Fawcett Publications, Inc., 1956), p. 184.

[6]Guido De Ruggiero, "Positivism", Encyclopedia of the Social Sciences (New York: The MacMillan Company, 1933), 12:206.

explanatory character. When they did so, however, they turned further toward metaphysics.

Hegel evolved the coherency theory of knowledge. The coherency theory says that all knowledge consists of one group of mutually coherent beliefs and that this coherent group of beliefs evolve to an "absolute idea". If a group of beliefs are not mutually consistent, then one or more of them must be wrong.

Hegel's theory includes no means of determining which belief is wrong. Coherence alone seems little evidence of truth for all the beliefs might be wrong and still be coherent. Also, he does not state how many beliefs on a particular subject are necessary before they become proven by their mutual coherency.

Coherence has some value as a characteristic in that one belief may be inferable from another and thereby achieve more certainty than if it existed alone. But to accept this, one must also believe that all knowledge is to some degree tentative and uncertain, which Hegel did not.

Hegel, like most other philosophers, applied his coherency theory to the political, economic, and social state in which he lived. Coherency, he said, is achieved by reconciling unity; that is, contradictions of thesis and antithesis are resolved in synthesis. The present reality and the envisioned idea would synthesize and come together in something higher. This higher stage would again divide by productive contradiction and unify at a still higher level of organization, complexity, and unity. This was Hegel's dialectic, a "progression from

unity through diversity to diversity-in-unity".[7] This process, Hegel said, would result in an absolute where all opposites are resolved into unity, and the sum of all things is the "absolute idea". This absolute, he said, realized itself in the political state of Prussia.

The followers of Hegel split at this point. The "right-wing Hegelians" interpreted Hegel as saying what he did say, that the absolute had realized itself in this rise of the Prussian state. By assuming that the dialectical series had reached its final term, Hegelianism was justification for conservatism and preservation of the status quo.

The "left-wing Hegelians", although putting a premium on the dialectic process, rejected or ignored the absolute. The process, they said, was not yet complete. From this evolved the philosophy of dialectical materialism. It was first sketched by Marx and Engels and developed further by Lenin and his successors.

The political doctrines of dialectical materialism often obscure its more philosophical aspects. It retains Hegel's concept of mutual coherency and interdependence as a source of knowledge. Marx believed that the process functioned entirely from economic motives. However, Engels at least recognized that all the aspects and relationships are not known and that the picture must to some extent remain incomplete. He rejected "absolute knowledge", substituting the belief that all knowledge is transitory.

> . . . this dialectical philosophy dissolves all conceptions of final absolute truth, and of a final absolute state of humanity corresponding to it. For nothing is final, absolute,

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[7] Ibid., p. 296.

> sacred. It reveals the transitory character of everything and in everything . . . .[8]

Recognizing this difficulty of absolute proof through coherency, Nikolai Lenin believed that the proof of things lay in actual practice.

> . . . study and reflection direct the thoughts to questions of identity and difference . . . . All these 'moments' or steps of knowledge are directed from the subject to the object, verify themselves by practice, and proceed through this verification of truth.[9]

Lenin here is adopting some of the doctrine of pragmatism which was arising at this time. But by admitting the necessity of verification by practice he seems to refute the validity of the dialectic. Lenin admits that the verification of truth lies in practice but still claims the dialectic as the source of truth. He states: "The aggregate of all the aspects of a phenomenon, their actuality, and their mutual dependence--that is the source of truth."[10]

Lenin did not explain how, if practice is the verification of truth, the dialectic can be the source of truth when the dialectic at the higher level of verification and truth implies thesis, antithesis, and contradiction. How does a practice verify itself when a contradiction is its ultimate consequence?

The thesis that the truth of a proposition lay in its practical consequences was originally formulated by Charles Pierce in 1878.

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[8]Hector Hawton, op. cit., p. 120, quotation by Friedrick Engels.

[9]Loc. cit., quotation by Nikolai Lenin.

[10]Loc. cit.

> The conception of any object, he [Pierce] showed, can consist of nothing else than its anticipated consequences. These are necessarily sensory, and guide conduct by determining our future attitudes and action. Conceptions are systems of expectation and plans of action which arise out of sensory experience and lead back into it and cannot pass beyond it.[11]

This philosophy was further developed by William James who gave it the name "pragmatism". Horace M. Kallen said of James:

> He viewed life and mind as streams of effort, of constant choosing between alternatives, of constant struggle to make the choice good by its consequences. As the consequences fall out, he observed, so are things judged . . . . Such judgments are retrospective, not prospective, and they apply as well to all the establishments of civilization as to events in a biography. Law, religion, government, art, science or what you will receive meaning and value not from what they are but from what they accomplish.[12]

John Dewey brought in to use the term "instrumentalism" as a synonym for pragmatism. He extended James' philosophy to "the analysis and interpretation of social institutions and to the redefinition and redirection of education".[13] Dewey was also influenced to a greater extent than was James by the Hegelians and the positivists. He laid greater emphasis on unity and in the continuing process of experimentation, communication, and participation. Dewey was not as radically empirical as was James who believed that "the relations of things are as real as the things themselves".[14] To Dewey the central thought was the conflict in experience which presented a problem and required integration and unification.

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[11]Horace M. Kallen, "Pragmatism", Encyclopedia of Social Sciences (New York: The MacMillan Company, 1933), 12:309.

[12]Loc. cit.

[13]Loc. cit.

[14]Ibid., p. 310.

Dewey also stressed the idea that in those instances where actual experimentation was impractical, the experimentation could be done through deliberative processes. He conceived of deliberation as the antithesis of tradition and radical empiricism and a substitute for random experimentation. He added to pragmatism the characteristic of predictability. Through deliberation one predicted the outcomes of the various competing lines of action.

> Deliberation is a dramatic rehearsal (in imagination) of various competing lines of action . . . . Deliberation is an experiment in finding out what the various lines of possible action are really like. It is an experiment in making various combinations of selected elements of habits and impulses, to see what the resultant action would be like if it were entered upon. But the trial is in imagination, not in overt fact. The experiment is carried on by tentative rehearsals in thought which do not affect physical facts outside the body. Thought runs ahead and foresees outcomes, and thereby avoids having to wait the instruction of actual failure and disaster. An act overtly tried out is irrevocable, its consequences cannot be blotted out. An act tried out in imagination is not final or fatal. It is retrievable.[15]

The pragmatism of Pierce, James, and Dewey does not recognize absolute truth. "Pragmatism dissolves dogmas into beliefs, eternities and necessities into change and chance, conclusions and finalities into processes."[16] It does not recognize a priori "facts" or "self evidence" through simple perception. To the pragmatist all knowledge is tentative.

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[15]John Dewey, Intelligence in the Modern World (New York: Modern Library, 1939), p. 341.

[16]Op. cit., Kallen, 12:311.

This aspect of pragmatism is widely disputed. Anti-pragmatists say that the phenomena which one perceives with one's senses are here, are facts, and are knowledge. They believe, like Descartes, that there is "self-evidence". The difficulty of this argument lies in its definition of "self-evidence". If it is to be of value it must include conceptual evidence (e. g., the existence of a place one has never seen). The level at which a phenomenon becomes "self-evident" appears to be a matter of degree. A loud noise may be self-evident, a faint one may not. Also, sense perceptions may appear to be self-evident but their meanings may not.

By rejecting conceptual evidence and rationalization, knowledge proved by self-evidence can furnish unwanted results when translated into action. Two 6 per cent interest rates may by self-evidence appear the same. However, if one of the rates should be figured by complicated procedures not easily perceived, and the true interest rate is actually 12 per cent, only the final and spurious figure of 6 per cent is self-evident, while its procedure, proof, and results when translated into action are not.

The question might be asked: Of what value is knowledge which does not promote desirable ends? By pragmatic thinking, promoting desirable results is the only purpose of knowledge, and thus, the aspect on which its definition should rest.

A critic of the pragmatic theory is Bertrand Russell who although agreeing with James and Dewey on many points is himself a "logical

positivist". Russell says of the pragmatic theory:

> With respect to the theory that we should substitute for 'knowledge' the concept 'beliefs that promote success,' it is sufficient to point out that it derives whatever plausibility it may possess from being halfhearted. It assumes that we can know (in the old-fashioned sense) what beliefs promote success, for if we cannot know this the theory is useless in practice, whereas its purpose is to glorify practice at the expense of theory. In practice, obviously, it is very often difficult to know what beliefs promote success, even if we have an adequate definition of 'success'.[17]

Russell charges that pragmatic theory is "halfhearted" and that one cannot distinguish between those beliefs that do or do not promote success. Dewey's definition, however, includes beliefs that promote success by deliberation as well as experimentation. They also must be predictable. Although no one can be absolutely sure that a particular group of beliefs will promote success they are, nevertheless (by definition), the best a person has and form the only rational basis for decision making.

Thus, theories of knowledge have been numerous and varied. Each appeared in an era of philosophical thought to which it was adapted and adapted from. It might be said that each theory furnished a basis for the philosophical thought of its time. The metaphysical systems appealed to the superstitious and allied themselves with the prevailing religious dogmas; rationalism accompanied the highly creative and esthetic culture of the Greeks; empiricism and positivism were the basis for the formulation of the scientific method and the rise of modern science in the

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[17] Op. cit., Russell, p. 157-158.

eighteenth century; Marxism and dialectical materialism appeared and oriented itself in a period of great economic and political unrest; pragmatism reflected a period of rapid progress, the practical application of science on a mass scale, and the increasing dignity and freedom of individuals. Each philosophy had its source, each its purpose, and each its impact on society. All were attempts to answer the questions: What is knowledge? How does one know when he has knowledge?

With the above as background, the following definition is offered for use in this paper.

Knowledge consists of those beliefs which have been verified by experimentation or have been verified logically by perception and deliberation and when used as a basis for action promote the desired and predicted result.

The major characteristic of knowledge under this definition is that knowledge is always tentative. Different knowledge beliefs may be less tentative and more certain than others, the test for certainty being predictability. If the effects of a belief are highly predictable when translated into action, a belief is very, but never absolutely, certain knowledge. If the effects are unpredictable, this knowledge is (or should be) very tentative. Similarly, when the results of a belief when translated into action are highly desirable, this also is very certain knowledge.

The definition above is tentative on three levels. (1) The knowledge of society is tentative because beliefs that better predict and promote success will come into being and be incorporated into the term

knowledge. (2) The knowledge of an individual is tentative for through study and investigation it can be increased. (3) As this definition is in itself knowledge (at least to the writer), it is tentative and better definitions will be made in the future. Its test is how adequately it serves the analytical purposes for which definitions are made.

The Decision Making Process

The actions of a person to a situation are determined by his experienced environment and inherited abilities. A person is born with the mental abilities which were "given" to him. He is then placed in an environment not of his own choosing. These two factors are the only influences on his life, and determine his future actions. A person obviously cannot separate himself from his mental ability, nor can he from his environment. Any decision to leave his environment must be made in that environment, with an intellect molded by that environment and, therefore, partially dependent on that environment. The means by which abilities and experience interact is through attitudes and opinions, that is, through the conceptual recognition of experience. Beliefs, composed of attitudes and opinions, are the synthesis of mental abilities and experience and are the means by which man experiences, conceptualizes, evaluates, remembers, re-evaluates and then acts.

The specific action which is selected is determined by attitudes interacting among themselves and evaluating and ranking themselves in a new order through deliberative processes. This new order reveals itself

in a judgment which is a direct result of the new attitude order and ranking and which determines, motivates, and ignites the new conduct or action.

This is always a new (or different) action. If it is not new, the decision making process will not take place. A judgment will continue to motivate action in the same manner until a new stimulus forces a person to re-evaluate his present attitudes and conduct. When a particular judgment exists for a long period of time without change, the resulting action tends to become habitual.

Habit is the "tendency to respond in a specific way under a wide variety of stimulus conditions".[18] The longer a particular judgment remains unchanged in a person, the associated beliefs on which it is based and the judgment itself become increasingly stronger and less subject to change by outside stimuli. In changing such habitual action, considerable discomfort to the individual may be involved. Also, habit interference makes it difficult to form good judgments if poor judgments on the subject have been made in the past.

Action is only changed when the attitudes oriented to this action are changed. Habitual behavior is caused by beliefs being in adjustment and equilibrium for a length of time. A change in behavior only comes about when these beliefs are disrupted from their previous state of equilibrium and mutual compatability.

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[18]Edwin R. Guthrie and Francis F. Powers, Educational Psychology (New York: The Ronald Press Company, 1950), p. 97.

Deliberative processes only occur when beliefs are out of adjustment. Deliberation is the means by which a person attempts to bring his attitudes and opinions into equilibrium and compatability. Action occurs when deliberation alone is unable to resolve this conflict between beliefs, and then a judgment, and hence, action is instituted to adjust the external environment in a way that will bring the attitudes and opinions back into balance.

Thus, deliberation is the mental process which enables beliefs to form and interact. It is only when this process is inadequate to reorganize the beliefs in a manner consistent with no change in external environment that a judgment is eventuated and action takes place.

To summarize: The decision making process is initiated by an external change in environment; this change is conceptualized in opinion and evaluated in attitude; if these new beliefs conflict with existing beliefs,then through deliberative processes an attempt is made to reconcile the conflict by reranking and re-evaluating beliefs; if unsuccessful, a judgment is formed which will change the environment (and thus, the opinions which conceptualize it); action is initiated; and (it is hoped) the beliefs will again return to equilibrium and compatability.

The process of decision making does not appear to be a purely dialectic one. It operates from forces other than those which are purely economic as described by Marx. It does not create conflict in and of itself, but only hopes to resolve conflict as it originates from new or novel stimuli. Also, it does not have any "absolute idea" or end.

It does, however, depend on coherency and inference in the deliberative process, and it is initiated by conflict. It is cumulative

and coherent in the sense that as the process continues, greater knowledge accumulates in it, and a person is better equipped to make decisions.

The decision making and action forming process posed above is based on pragmatic concepts. Actions are initiated for definitive purposes. These purposes are to satisfy, that is, to resolve internal conflict. Through intelligent action man is able to change his environment, and thus, resolve this internal conflict.

Action based on knowledge will resolve this conflict, at least to the greatest possible extent. Attitudes and opinions are knowledge insofar as they meet the conditions of the definition of knowledge as posed in this chapter. When action is based on beliefs which are not knowledge, not only will this action not adjust environment in a manner which will resolve the internal conflict of beliefs, but it may make it worse.

The best available knowledge reflected in attitudes and opinions will not always furnish the means to completely resolve conflict. Knowledge does not furnish man complete control over his environment. When knowledge of control is inadequate, and knowledge of the inadequacy exists, no judgment is formed (no decision is yet taken) or the judgments formed are tentative and cautious.

The value of knowledge is in its results when translated into action. As this knowledge inheres in means as much as ends, no distinction can be made between them. A judgment evaluates means and ends together for it is necessary for the conceptual means to resolve conflict as it is for the conceptual ends. Insofar as this pragmatic

decision making process is concerned, means and ends are the same thing. They are instituted in the same way and as concepts perform the same functions.

It is not overt action which resolves conflict but the judgment which initiates that action which resolves conflict. A judgment may be for action sometime in the future. The conflict is resolved when the judgment for action is made. It does not have to wait until the action is eventuated.

Two people may be manifesting the same behavior but have different judgments which initiated their action. Describing the overt action of people does not necessarily explain the attitudinal motivation or purposes for which their action was taken, nor does it furnish information which can predict under what circumstances similar action will again be taken. It merely implies that the overt action is the result of a judgment which was believed to resolve internal conflict. To predict action, one must understand its motivation, that is, the judgments, accompanying beliefs, and conflicts among those beliefs which cued that action.

Summary of Definition Concepts

Belief: A conceptual recognition or formulation of fact.

Opinion: A belief which is non-evaluative and neutral in its orientation toward action.

Attitude: A belief which is normative evaluative and is a predisposition for action.

Value: A highly organized, strong, and durable attitude with strong influence on action.

Knowledge: Those beliefs which have been verified by experimentation or have been verified logically by perception and deliberation and when used as a basis for action promote the desired and predicted result.

Judgment: An immediate or resolved decision for action which is a direct result of a re-evaluation and re-ranking of existing beliefs.

Deliberation: The mental process which brings attitudes and opinions into equilibrium and enables beliefs to form, interact, and function in the control of environment.

The Analytical Indices and Scales

To measure the effects of these psychological concepts as well as the concepts themselves, some form of scaling or indexing was required. Deliberation and attitude indices were evolved from interviewer appraisals at the conclusion of each interview. A knowledge of credit sources scale was constructed from correlation data gathered through a test survey.

The construction and meanings of these indices and scales will be discussed in this section. An understanding of the form, reliability, and purpose of these indices and procedures is a prerequisite for correct interpretation of the correlation and regression results which follow.

"General Attitude" Index

At the conclusion of every interview, the interviewer made an appraisal of the farmers' "general attitude toward credit". Every farmer was classified in one of the following categories.

4 Strongly in favor of credit

3 In favor of credit

2 Undecided about credit

1 Against credit

0 Strongly against credit

The scores, zero to four, were assigned to the scale in order to give it a numerical value. Similar to all cases where such values were arbitrarily assigned, the values on each class may under or overstate the comparative differences between classes.

The above index has two dimensions, that of saliency and that of object value. The difference between being strongly in favor of credit and just being in favor of it is one of saliency or strength. The difference between being in favor or being against credit is one of object value. However, there is some interrelationship between these two characteristics, as the more radical or reactionary the attitude, the more likely it is to have greater strength.

This appraisal is not in actuality an attitude scale; it is an interviewer's opinion of the strengths and object values of the many attitudes expressed by the interviewee.

Composited attitudes cannot be ranked and still preserve their attitudinal characteristics. When more than one attitude is scaled at

a time, the interrelationships between object value and saliency tend to balance and offset each other. Thus, if two attitudes, one positive and one negative, are scaled together, their synthesis will tend toward neutrality or undecidedness.

Although more than one attitude cannot be ranked on the same scale and still preserve its individual characteristics, the resulting composited scale or index still preserves much of the functional identity of attitudes. The only characteristic of an attitude which is of real value is the conduct that attitude determines when translated into action. This aspect is preserved and even strengthened in a composited index of attitudes.

In actuality, a composited index of attitudes on the same subject is a scale of the total attitudinal orientation toward action. This is to say, a composited index is a scale of the judgment for action which would be expected from that attitudinal organization.

In the decision making process, action is not the result of just one attitude but of many attitudes composited into a judgment. The object values and strengths of many attitudes and opinions are negated and balanced in a manner comparable to which the interviewer balanced and ranked them in making the index appraisal.

In summary, the "General Attitude" Index is a scale of the interviewer's appraisal of the strength and object value of the credit judgment. In essence, it is a prediction based on the beliefs expressed to the interviewer of future credit action. The interviewer ignored farmers' present actions and environment in his appraisal.

Deliberation Index

The deliberation index is also a composited and interviewer appraisal scale. In this scale, the interviewer attempted to appraise how much thought and investigation each farmer gave to the various credit matters covered by the questionnaire. It was an attempt to reflect how much of a farmer's credit behavior was deliberative rather than habitual.

The composited score includes deliberation about many aspects of credit. Similar to the "general attitude" index, it is a measure of deliberation relative to action rather than to any one of the many and various credit attitudes involved in the deliberative process. Thus, it can be considered as a measure of the deliberation involved in the "general attitude" or judgment index.

It was believed that another measure of deliberation would be the number of "I don't know" answers for which no further explanation (reason or qualification) was given on selected opinion and attitude questions in the survey. For each farmer the number of "I don't know" answers to fifteen selected attitude and opinion questions was counted, and a gross correlation was calculated between this total number of "I don't know" answers and the score on the deliberation index. The gross correlation coefficient was 68.7 and highly significant.

Because of the extremely skewed distribution of the "I don't know" answers, and the close correlation between this measure and the deliberation index of appraisal, it was decided to use the appraisal as the analytical measure of deliberation. As in the "general attitude" index, arbitrary scores of zero to four were assigned.

Score	Class
4	Very deliberative
3	Deliberative
2	Somewhat deliberative
1	Slightly deliberative
0	No deliberation

There were questions in the questionnaire directed specifically to the amount of deliberative behavior. However, in all correlation analyses the deliberation index will be used.

Knowledge Score

The construction of the knowledge scale was briefly discussed in Chapter I. The scale was based on intercorrelation and designed to give a relative measure of a farmer's knowledge of his credit source alternatives.

It is a twenty-one point scale based on the number of correct answers out of twenty (no right answers were scored zero). The questions used in the scale are listed in Appendix A, Table I. Seven credit agencies were mentioned in the scale. Six of them were covered with three questions on each, and the seventh source (banks) was covered with two questions.

Questions were originally constructed which seemed to have a maximum amount of certainty. It was believed that these questions were certain enough knowledge for the interviewer to rate the answers as "right" or "wrong".

However, due to the difficulty of designing questions about those sources (e. g., private individuals) which have no common loan policy and

few universal characteristics, some questions were not as certain or dependable as others. The investigator recognized this defect, but because of the scarcity of valid questions about these credit sources and because in the statistical construction of the scale these questions did contribute to the strength of the scale, the investigator considered the small distortion created as being negligible. It would not, however, be negligible in a more precise scale.

For the same reason, many of the questions were not very functional as independent questions. This is important because of their lesser importance in influencing action. They were, however, correlated with the total score and strengthened the scale.

CHAPTER III

THE AMOUNTS FARMERS BORROW

Introduction

Four variables were considered central to this study. These were knowledge score, deliberation index, attitude index, and amount borrowed. It is these factors which can be changed, directly or indirectly, through credit education. The other factors listed in Hypothesis I, Chapter I either cannot be changed or their effects on credit action are subordinate to some other economic or social purpose. The amount borrowed is considered the dependent variable and indicative of credit action. The effects of the other variables on credit action may be measured by their effect on the amount borrowed.

The statistical analyses in this and the following chapter take three major forms. These are correlation, regression, and analysis of variance. An additional analysis in this chapter is the comparison of the above analyses by two different sample sizes.

In the correlation and regression analyses certain measures were used as indicative of others. It was also necessary to apply a numerative characteristic to some of the measures. The method used to enumerate the attitude and deliberation indices and the knowledge scale was explained in Chapter II.

In order to give tenure a quantitative characteristic, it was necessary to apply somewhat arbitrary numerical values to the three tenure statures.[1] The enumeration was as follows:

Owner-operator	1
Renter	2
Sharecropper	3

A similar procedure was used for state area, assigning an arbitrary numeral to each of the major state divisions. Middle Tennessee was considered a grading area between West and East. For state area the enumeration was as follows:

West Tennessee	1
Middle Tennessee	2
East Tennessee	3

These numbers were more or less arbitrarily chosen and possible resulting biases should be taken into account when interpreting the correlation results. The numerical values may under or overstate the actual comparative relationship.

It was believed that the most practical measure of size of farm would be volume of gross sales, and that per cent of gross income from

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[1]Tenants were defined as those farmers who rented more than three-fourths of the land which they operated. Sharecroppers were defined as those farmers who furnished less than one-half of the non-real estate capital on the farm. The direction of these enumerations should be noted. In the correlation analyses, if sharecroppers have a higher value, measured in the terms of the dependent variable, than owners, the association will be positive. If owner-operators have the higher value, the association will be negative.

crops (as compared to livestock) would be the most functional quantitative measure of type of farm. As a measure of part versus full-time farming, the measure used was the per cent of net income which a farmer received from off-farm sources. The actual figures were used for age, and the last grade of school completed was used for education.

Table I lists the correlation and regression coefficients from multivariate analysis on the amounts which farmers borrowed over a three-year period from the total 500 sample. The amount of association between each independent variable and the dependent variable is listed and its level of significance indicated.[2]

Table II is the same analysis when restricted to the sample of 288 borrowers only. Comparisons between the tables should indicate possible differences between variables in their influence on the decision to borrow or not borrow versus the decision of how much to borrow.

The third major technique involved in this chapter is the analysis of variance of the regression equation. It was believed that joint intercorrelation existed between the independent variables which would cause the coefficient to understate (or overstate) the actual relationship. Joint intercorrelation refers to the combined indirect effect of two variables over and above the direct effect of each independently. Variable X_2 may have a direct effect on X_1 but it may also affect X_3 which further affects X_1.

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[2]The t test was used in the testing of the partial coefficients. The F test was used in testing the multiple coefficients. The significance level listed is the proportionate chance that the item was not statistically different from zero.

These joint indirect effects are parceled out in Table III. The Beta squares are comparable to the partial coefficients of determination or the squares of the partial coefficients of correlation. The term $(2r_{23}\beta_{12.m}\beta_{13.m})$ indicates the amount of indirect association on X_1 from the X_2 and X_3 variables combined.[3]

The total of all direct and indirect correlations are necessarily equal to the multiple coefficient of determination $(R^2_{1.m})$.

Such correlation and regression analyses do not indicate causal relationships, only associated relationships. The causal relationships expressed here and in subsequent chapters are the investigator's judgments of the causal chain and his interpretation of the data in its interrelationships between the direct and indirect effects.

The Explained Variability

For the 500 farmer analysis the explained portion of the variability in the amounts borrowed by the ten factors coming within the scope of the study was $R^2_{1.m} = .33649$. When only those farmers who borrowed were included in the analysis, $R^2_{1.m} = .37345$. The ten factors which explained this variation will be discussed individually.

The discussion here will restrict itself to the analysis of all farmers whether they borrowed or not. It assumes zero borrowing as

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[3]In the subscripture used in this paper, all factors to the right of the decimal refer to those factors whose effects are eliminated or held constant. m equals all other factors. For a discussion of joint relationships and analysis of variance of a regression equation see James G. Smith and Acheson J. Duncan, Fundamentals of the Theory of Statistics (New York: McGraw-Hill Book Company, Inc., 1944), pp. 422-468.

TABLE I

MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS OF THE AMOUNTS FARMERS BORROWED OVER A THREE-YEAR PERIOD

Dependent Variable: Amount Borrowed (X_1)
Sample: 500 Farmers

	Independent variable	Gross correlation coefficient	Partial correlation coefficient	Partial regression coefficient	Significance of partials at level indicated
		r	$r_{1.m}$	$b_{1.m}$	
X_2	Attitude index	.417	.180	690.8	.005
X_3	Deliberation index	.388	.045	157.4	.15
X_4	Knowledge score	.483	.219	227.6	.001
X_5	Age	-.116	-.121	- 27.0	.005
X_6	Education	.253	-.045	- 42.7	.15
X_7	Sales	.313	.201	13.3	.001
X_8	Tenure status	-.096	-.095	-448.2	.02
X_9	Per cent crop income	.004	.016	1.1	.35
X_{10}	State area	.172	-.088	-330.9	.025
X_{11}	Per cent off-farm income	-.117	-.050	- 3.9	.15

Coefficient of multiple correlation	$R_{1.m}$ = .57008, significant at	.001
Coefficient of multiple determination	$R^2_{1.m}$ = .33649, significant at	.001
Coefficient of non-determination $K^2_{1.m} = (1 - R^2_{1.m})$	= .66351, significant at	.001
Regression constant	a = 733.77	

TABLE II

MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS OF THE AMOUNTS BORROWERS BORROWED OVER A THREE-YEAR PERIOD

Dependent Variable: Amount Borrowed (X_1)
Sample: 288 Borrowers Only

	Independent variable	Gross correlation coefficient	Partial correlation coefficient	Partial regression coefficient	Significance of partials at level indicated
		r	$r_{1.m}$	$b_{1.m}$	
X_2	Attitude index	.401	.160	781.6	.005
X_3	Deliberation index	.413	.059	235.9	.15
X_4	Knowledge score	.529	.273	313.4	.001
X_5	Age	.019	-.104	- 27.4	.04
X_6	Education	.241	-.064	- 67.6	.15
X_7	Sales	.360	.222	15.2	.005
X_8	Tenure status	-.180	-.146	-837.5	.01
X_9	Per cent crop income	-.028	.019	1.6	.35
X_{10}	State area	-.196	-.111	-478.2	.035
X_{11}	Per cent off-farm income	-.184	-.046	- 4.2	.25

Coefficient of multiple correlation	$R_{1.m}$ = .61311, significant at	.001
Coefficient of multiple determination	$R^2_{1.m}$ = .37594, significant at	.001
Coefficient of non-determination $K^2_{1.m} = (1 - R^2_{1.m})$	= .62406, significant at	.001
Regression constant	a = 1235.082	

TABLE III

VARIANCE ANALYSIS OF REGRESSION EQUATION OF THE AMOUNTS FARMERS BORROWED OVER A THREE-YEAR PERIOD

Dependent Variable: Amount Borrowed (X_1)
Sample: 500 Farmers and 288 Borrowers

Symbol	Independent variable		Fraction of variability in amount borrowed accounted for: 500 farmers	288 borrowers
X_2	Attitude Index			
	Direct association	$\beta^2_{12.m}$	.03741	.02444
	Indirect association:			
X_2X_3	Attitude - Deliberation	$2(r_{23}\beta_{12.m}\beta_{13.m})$	.01141	.01028
X_2X_4	Attitude - Knowledge	$2(r_{24}\beta_{12.m}\beta_{14.m})$	.05747	.04887
X_2X_5	Attitude - Age	$2(r_{25}\beta_{12.m}\beta_{15.m})$	.00577	-.00182
X_2X_6	Attitude - Education	$2(r_{26}\beta_{12.m}\beta_{16.m})$	-.00537	-.00361
X_2X_7	Attitude - Sales	$2(r_{27}\beta_{12.m}\beta_{17.m})$	.00770	.00752
X_2X_8	Attitude - Tenure	$2(r_{28}\beta_{12.m}\beta_{18.m})$	.00663	.01159
X_2X_9	Attitude - Per cent crop income	$2(r_{29}\beta_{12.m}\beta_{19.m})$	-.00007	-.00055
X_2X_{10}	Attitude - State area	$2(r_{2,10}\beta_{12.m}\beta_{1,10.m})$	.00387	.00348
X_2X_{11}	Attitude - Per cent off-farm income	$2(r_{2,11}\beta_{12.m}\beta_{1,11.m})$	-.00048	.00089
X_3	Deliberation Index			
	Direct association	$\beta^2_{13.m}$	.00286	.00436
	Indirect association:			
X_3X_4	Deliberation - Knowledge	$2(r_{34}\beta_{13.m}\beta_{14.m})$	.01956	.02747
X_3X_5	Deliberation - Age	$2(r_{35}\beta_{13.m}\beta_{15.m})$	-.00013	-.00207
X_3X_6	Deliberation - Education	$2(r_{36}\beta_{13.m}\beta_{16.m})$	-.00175	-.00280
X_3X_7	Deliberation - Sales	$2(r_{37}\beta_{13.m}\beta_{17.m})$	.00346	.00507
X_3X_8	Deliberation - Tenure	$2(r_{38}\beta_{13.m}\beta_{18.m})$	.00269	.00683
X_3X_9	Deliberation - Per cent crop income	$2(r_{39}\beta_{13.m}\beta_{19.m})$	-.00003	-.00021
X_3X_{10}	Deliberation - State area	$2(r_{3,10}\beta_{13.m}\beta_{1,10.m})$	.00025	.00076
X_3X_{11}	Deliberation - Per cent off-farm income	$2(r_{3,11}\beta_{13.m}\beta_{1,11.m})$	.00036	.00069
X_4	Knowledge Score			
	Direct association	$\beta^2_{14.m}$	.07710	.10829
	Indirect association:			
X_4X_5	Knowledge - Age	$2(r_{45}\beta_{14.m}\beta_{15.m})$	.00202	-.00640
X_4X_6	Knowledge - Education	$2(r_{46}\beta_{14.m}\beta_{16.m})$	-.01171	-.01834
X_4X_7	Knowledge - Sales	$2(r_{47}\beta_{14.m}\beta_{17.m})$	.02904	.04257
X_4X_8	Knowledge - Tenure	$2(r_{48}\beta_{14.m}\beta_{18.m})$	.00805	.02044
X_4X_9	Knowledge - Per cent crop income	$2(r_{49}\beta_{14.m}\beta_{19.m})$	-.00047	-.00090
X_4X_{10}	Knowledge - State area	$2(r_{4,10}\beta_{14.m}\beta_{1,10.m})$	.00825	.01335
X_4X_{11}	Knowledge - Per cent off-farm income	$2(r_{4,11}\beta_{14.m}\beta_{1,11.m})$	.00222	.00486
	Direct association:			
X_5	Age	$\beta^2_{15.m}$	.01379	.00946
X_6	Education	$\beta^2_{16.m}$	.00217	.00412
X_7	Sales	$\beta^2_{17.m}$	.03668	.04299
X_8	Tenure	$\beta^2_{18.m}$	.00886	.02273
X_9	Per cent crop income	$\beta^2_{19.m}$	.00018	.00024
X_{10}	State area	$\beta^2_{1,10.m}$	.00631	.01008
X_{11}	Per cent off-farm income	$\beta^2_{1,11.m}$	.00211	.00182
	Total explained variation		.33621	.39650
	Residual of explained variation		.00028	-.02056
	Coefficient of multiple determination	$R^2_{1.m}$	.33649	.37594
	Unexplained variation	$K^2_{1.m} = \frac{\sigma^2_{1.m}}{\sigma^2_1}$	.66351	.62406
	Total variation in X_1		1.00000	1.00000

merely the low point on the dollar continuum of total indebtedness. Differences between the effects of the ten factors on the two decisions of whether or not to borrow versus how much to borrow will be discussed at the end of the chapter, as will possible factors which make up the unexplained portion of the variability ($K^2_{1.m}$). The partial effects will be discussed individually and stated in terms of the fraction of the total variability which they explain. It should be implicitly understood that this is the explained fraction when the other variables are held constant.[4]

General Attitude Index (X_2)

In explaining the variation in the amounts farmers borrowed, the indirect effects of attitudes were more important than the direct effects. The attitude index directly explained just 3.7 per cent of the variation in the dependent variable, while the combined indirect effect of attitudes and knowledge explained another 5.7 per cent of the variation. In association with deliberation, attitudes accounted for 1.1 per cent of the variation (see Table III).

Considering the direct effects only, it can be estimated from the partial regression coefficient that an increase of one point on the five

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[4]In some cases the signs of the gross and partial coefficients are different. This means that although the factor is grossly correlated with the dependent variable in one direction, when the other factors are held constant, the direction of the correlation is reversed. Differences in the amounts and signs of the gross and partial coefficients are caused by joint intercorrelation between the independent variables. Unless stated otherwise, only the partial coefficients will be discussed in the text of this paper.

point attitude scale would result in increased borrowing to the amount of $691 per farmer over a three-year period, assuming all other factors constant.[5]

The total effect of attitude was decreased by its association with education.[6] The attitude index did not influence the amount borrowed as much for higher educated farmers as it did for lower educated farmers. Although this negative effect decreased the explained variation just .5 per cent, the fact that it existed at all indicates that education tended to shift attitudes from a fixed to a more flexible position.

Conversely, the joint effect of attitudes with age was positive to about the same degree. Older farmers had slightly more extreme attitudes which affected their actions. The age and attitude factors complemented each other in explaining the variation in amount borrowed. The education and attitude factors were substitutive in explaining this variation.

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[5] $b_{12.m} = 690.8$

[6] Whether the total amount of explained variability in the dependent variable is increased or decreased through two independent variables in joint combination is indicated by their combination sign in Table III. The directional effect of each variable is indicated by the sign of its coefficient of partial correlation or regression in Tables I and II. The combination of a plus factor and a minus factor as listed in Table I or II will result in a minus result in Table III, if the gross correlation between these two factors is positive. If the gross correlation is negative, then the joint association is negative and they contribute to a decreased percentage of explained variability. The joint association of any two variables was negative if any one or all three factors in the term ($R_{23}\beta_{12.m}\beta_{13.m}$) were negative. If none or any two were negative, the joint association was positive.

Deliberation Index (X_3)

The deliberation index accounted for very little of the amounts farmers borrowed, either directly or indirectly. Its largest effect was in its joint association with knowledge and then it explained less than 2 per cent of the variation. Its direct correlation was practically nil.

It should not be presumed, however, that deliberation plays an unimportant role in the credit decision making process. The fact that there was little direct association indicates only that farmers with large loans did not deliberate more than farmers with small or no loans. It does not mean that when an individual farmer changes his borrowing behavior he does so utilizing no deliberative processes. Deliberation in the past resulting in habitual behavior thereafter would not necessarily be reflected in the deliberation index. Borrowers as well as non-borrowers can act habitually. This will be discussed further in the following chapter. Suffice it to say here that deliberation had little measurable effect on amount borrowed but what effect it did have was positive and was jointly associated with knowledge.

Knowledge Score (X_4)

The knowledge score was the single most important factor in explaining the variability in the amounts farmers borrowed. In its combinations with attitude and deliberation it indirectly accounted for more variability than either of the other two did directly. Directly, knowledge accounted for 7.7 per cent of the variability in amount borrowed.

The knowledge scale was a measure of farmers' awareness of credit terms and sources. Due to the types of knowledge it covered, it is more likely that attitude and deliberation would affect it more than it would affect them. That is, since the type of knowledge reflected in the index was knowledge of credit "facts" rather than theoretical knowledge of their meanings, one would expect that the effects of this knowledge on the attitudes and/or on the tendency to deliberate would be small. If an index had been devised which tested the knowledge of the farmer's ability to interpret the effect of different interest rates, collateral requirements, and repayment terms, etc. on the optimum level of borrowing, the opposite might have been true.

Thus, although it is a two-way relationship, the main causal chain was considered to be attitude--deliberation--knowledge. It was believed that all factors would be causal on knowledge rather than vice versa. It is for this reason that the joint associations of knowledge with attitude and deliberation were grouped as they were in Table III. This problem of causation is discussed further in Chapter IV.

Similar to the situation with respect to attitudes and education, the joint effects of knowledge and education were negative and subtracted from the total explanatory power of each. Farmers with more schooling borrowed less money, but their level of knowledge was higher. Thus, the effects of knowledge were partially negated.

Knowledge also had an appreciable effect through its combination with sales. This very important aspect is discussed below under sales.

Age (X_5)

Age accounted directly for approximately 1.4 per cent of the variation in X_1, the dependent variable. It was negative in its direction as older farmers tended to borrow less than younger farmers.

Except for a small association with the attitude index, age had very little joint affect when combined with any of the psychological variables. Its association with attitude was to only slightly increase the amount of explained variation. Older farmers had more negative attitudes about credit and they also borrowed less money because of their age.

Much of the effect of age was partially negated due to the fact that the very young farmers also borrowed less money (see Table IV). Much of this low borrowing by very young farmers was probably due to the fact that a young farmer on a large farm would most likely still be working with his father. The person on the farm who made the financial decisions was the one who was interviewed, and in most cases this was the father. A very young farmer on his own would likely be operating a small operation with little security for credit and quite often supplementing his income with an off-farm job. This suggests that the age coefficients would have been increased had a curvilinear rather than a linear function been applied to the distribution. It also suggests that there may be external capital rationing on the basis of age to the very old and the very young farmers.

TABLE IV

AVERAGE OUTSTANDING INDEBTEDNESS PER FARMER BY AGE GROUPS

Age group	Number of farmers	Total indebtedness	Average indebtedness
		Dollars	Dollars
17-29	32	16,921	529
30-39	85	122,436	1,440
40-49	99	104,820	1,059
50-59	114	80,040	702
60-69	112	74,344	664
70-79	53	18,930	357
80-83	5	1,500	300
	500	418,991	838

Education (X_6)

Education had very little direct association with the dependent variable. But as is discussed above it had some joint association, especially through knowledge and attitudes. It also had a joint association with sales.

The positive gross correlation indicates that those farmers with high education did borrow more than those with low education. However, when the other factors were held constant the partial coefficient for education became negative.[7] The positive gross correlation can be explained by its inverse relationship with knowledge and attitudes. Although the more highly educated farmers borrowed more money, it was in spite of, not because of their education.

The explanation of why education should have this negative direct and negative joint effect may be that either farmers do not carry the results of formal education over into their business affairs, or else the correlation coefficients were due to sampling chance and statistical error. The significance level of .15 leaves a possibility that the education results indicated were not indicative of the true situation but were due to sampling chance.

A more likely possibility, however, is that each of these variables, education and amount borrowed, was further influenced by a third variable which was not included in the analysis. This variable is inherited wealth. The better educated farmers would most likely inherit

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[7] $r_{16} = .253$; $r_{16.m} = -.045$

more and would thus have less pressing need for credit. Even this reason is qualified by the fact that as is mentioned below very few farms in Tennessee could be considered adequately capitalized or of optimum size. Just twenty-five of the 500 farmers interviewed had gross sales in excess of $10,000, and education in its joint association with size of farm (as indicated by sales) accounted for just .4 per cent of the variability in the amounts farmers borrowed.

Sales (X_7)

It was expected that farmers with higher sales, i.e., larger farms, would have greater credit possibilities and would utilize more credit than farmers with lower sales. Very few farms in Tennessee could be considered capitalized to the extent that they would be approaching diminishing returns. The median gross sales of the 500 farms was just $1600.

Sales accounted directly for 3.7 per cent of the variation in amount borrowed. But it accounted indirectly through knowledge for an amount almost as much as this, and in the analysis which included only the borrowers, it accounted for more. The joint association of credit source knowledge with operators of large farms was as important a determinant of the amounts farmers borrowed as the size of farm itself.

To further illustrate this low direct influence of sales, the partial regression coefficient of sales (in $100 units) was 13.3, of knowledge 227.6. Thus, considering the direct effects only, an increase in one point on the knowledge scale would have as much influence on the amount borrowed as would a $1,700 increase in sales volume.

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[8] $b_{17.m} = 13.3$; $b_{14.m} = 227.6$: $227.6 \ (100) \div 13.3 = 1700$

This low coefficient indicates that there is very little external capital rationing in Tennessee. If there were a large amount of external capital rationing (unavailability of credit) the Beta squared value of sales should be appreciably higher than the 3.7 per cent level. The rationing appears to be internal in the form of unfavorable attitudes and limited knowledge of opportunities and alternatives. Most farmers could borrow more even under present institutional policy.

Tenure Status (X_8)

Tenure accounted directly for slightly less than 1 per cent of the variability and indirectly with knowledge for about the same amount. The joint effects were additive as owners had more knowledge of credit and utilized more of it.

These results should be taken as merely suggestive because of the arbitrary weighting applied to the tenure statuses.

Per Cent Income From Crops (X_9)

Contrary to what was originally hypothesized, the per cent of a farmer's income which he received from crops had little effect, direct or indirect, on the amount which he borrowed.

Insofar as this measure was indicative of seasonal peaks in farm income and expenses, these peaks were of little significance. The fact that the total loan volume included long-term mortgage credit may be a reason why no relationship was found. Of the ten factors included in the analysis, per cent of incomes from crops had the lowest level of

significance. There was a 35 per cent chance that its partial correlation coefficient ($R_{19.m}$ = .016) was not statistically different from zero. With other factors constant, the average difference in borrowing between farmers who were 100 per cent livestock farmers and 100 per cent crop farmers was approximately $110 over the three-year period.[9]

State Area (X_{10})

The major variables which would be expected to vary between West and East Tennessee were included in the analysis and held constant. Nevertheless, a small association, direct and indirect through knowledge, remained between state area and the amount borrowed. Location's largest effect, however, was its joint association with the per cent of income from crops which added another 1 per cent to the explained variability. East Tennessee farmers borrowed less money, knew less about credit, and received more of their income from livestock sources than did West Tennesseans.

These joint associations of state division with the other factors indicate some differences in internal credit rationing between areas. The direct association may indicate significant differences in external credit rationing between areas. It appears that similar to those who borrowed from them, East Tennessee lenders were more conservative than lenders in West Tennessee. The -.088 partial coefficient of correlation was significant at the .025 level.

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[9] $b_{19.m}$ = 1.1; $b_{19.m}$ (1-100) = (1.1)(100) = 110

On the basis of the partial regression coefficient, it can be estimated that through the direct effects of location with all other factors constant, a farmer in East Tennessee would borrow in a three-year period an average of $662 less than a comparable farmer in West Tennessee.[10]

Although the direct and indirect coefficients of state area were small, its regression coefficient in dollar terms was high, as was its level of significance. This probably means that although cultural and external institutional differences between areas were not great, they did exert a very pronounced effect.

Per Cent of Income From Off-Farm Sources (X_{11})

The amounts of income which farmers received from off-farm sources had little association with the amounts which they borrowed. The reason for this may be that the credit which part-time farmers did not use in their farm operation, they did use in home consumption.

This appeared to be the case. Farmers were questioned as to whether they had ever used credit in their farm operation, even before the three-year period for which loan information was taken. Four hundred three of the 500 farmers said that they had used credit in their farm operation at one time or another. These farmers on the average received 28.6 per cent of their income from off-farm sources. Ninety-four farmers said that they had never used credit in their farm operation.[11] They received an average of 48.6 per cent of their income from nonfarm sources.

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[10] $b_{1,10.m} = -.330.9$; $b_{1,10.m}(1-3) = (-.330.9)(2) = -661.8$

[11] Three farmers did not answer.

Although both part and full-time farmers used about the same total amount of credit with other factors constant, fewer part-time farmers used farm production credit.

The Analysis Restricted to Borrowers Only

When the analysis was restricted to the 288 farmers who had at least one loan within the preceding three-year period, the ten factors explained approximately 4 per cent more of the variability in the amounts which farmers borrowed than they did when the analysis included all farmers whether they borrowed or not. Some of the individual effects had differences in importance in the two regression analyses.

Attitudes had slightly more effect when all the farmers were included in the sample than when they weren't. When just the amount borrowed by borrowers only was the dependent variable, attitudes were inversely associated with age, not as they were in the 500 sample size. It appears that older non-borrowers have more negative attitudes toward credit than do younger non-borrowers, but the older borrowers have more positive attitudes toward credit than do younger borrowers.

Deliberation appeared to have about the same effect in both analyses. Knowledge score had more influence on the amount which borrowers borrowed. It had considerably more direct and indirect association when combined with sales, tenure, or state area. These factors alone also had more direct effect. Once the decision was made to borrow, it would

be expected that the amount to be borrowed would to a greater degree depend on these farm factors of size, tenure, and credit availability.

In summary, very few significant differences appeared in the two analyses. It may be concluded that within the scope of this study the factors farmers consider in their decision to borrow or not borrow are not significantly different from the factors they consider in deciding how much to borrow.

The Unexplained Variability

Approximately two-thirds of the variation in the amount borrowed of each sample size was left unexplained by the ten variables coming within the scope of the study. Some hypothesizing is in order as to the factors which were responsible for this unexplained variation.

Probably the largest single factor not included in the correlation equation was the farmer's financial situation in relation to his inheritance, savings, and net worth. Farmers who inherited well capitalized farms would not be as likely to borrow as much as those who came up the "agricultural ladder". Insofar as external capital rationing was not reflected in gross sales, farmers' present income and repayment ability under present institutional policy would be a factor in determining the amounts which they borrowed. Associated with the farmer's financial situation would be the length of time he was on his farm, age of family, present and future consumption and production needs, etc.

The influence of the farm wife in borrowing decisions might also be a factor. Sixty-seven per cent of the farmers (73 per cent of the

farmers with wives) said that their wife was familiar with the business affairs of the farm. Another 10 per cent said they were somewhat familiar with it. Four per cent of the farmers said that their wives did not agree with them on matters concerning borrowing money, and 29 per cent said that their wives sometimes disagreed with them on borrowing money. The interviewer estimated from the scarce information available on the subject that the wives were dominant and made or would make the ultimate credit decision on at least 5 per cent of the farms.

Another possible factor which might account for some of the unexplained variation was the varying types of landlord-tenant arrangements. Some landlords lent their sharecroppers the capital to uphold their share; others furnished the goods to them directly and took their payment in a larger share of the profits, and no loan was involved.

Error of measurement and inadequacies in the techniques undoubtedly contributed to the unexplained portion of the variability. The arbitrary enumeration of the indices, tenure status, and state location could have under or over weighted their comparative effect. The accuracy of the observations was also dependent on the memories of the farmers. Linear correlation techniques were used and for many of the variables a linear line of regression may not have been the best possible fit to the relationship.

These same inadequacies exist but to a lesser degree in the correlation and regression analyses which follow. In spite of these technical inadequacies and the limited scope of the study, most of the correlation results came out highly significant.

CHAPTER IV

FARMERS' ATTITUDES AND DELIBERATION ABOUT CREDIT USE

Introduction

The attitude index was second only to the knowledge score in its influence on the amounts farmers borrowed.

It should be reiterated from Chapter II that some attitudes are knowledge and that knowledge includes some attitudes, but neither includes all of the other. Knowledge consists of opinions as well as attitudes, and attitudes include attitudinal beliefs which are not knowledge. The knowledge scale was essentially an index or summation of opinions about credit sources. It included no attitudinal questions. The attitude index, on the other hand, was the interviewer's appraisal of the composite of attitudes which were expressed to him. Although interrelated, the two measures can be treated separately in analysis and analyzation.

Deliberation was defined as the catalytic process which enables attitudes and opinions to form and interact. As was stated in Chapter II, the deliberation index is similar in construction to the attitude index. In this chapter, the factors which determined and were associated with the attitude and deliberation indices as well as characteristics of the indices themselves will be discussed. The distribution of farmers on the two indices are listed in Appendix A, Table II. The attitude

index had a close to normal distribution, the deliberation index had a very skewed distribution. Again as in the preceding chapter, unless otherwise stated, the data are presented in a form assuming all other factors in the analysis constant.

Factors Determining Credit Attitudes (X_2)

Knowledge (X_4) and Deliberation (X_3)

The nine factors in the correlation analyses in Tables V and VI were associated to 38.7 per cent of the variability in the attitude scale. Some of these factors were not, however, one-way causal effects on attitude. Attitude may be more causal than caused by its association with the deliberation index and knowledge score. These intercausations between attitudes, deliberation, and knowledge are discussed elsewhere in this and the preceding chapter.

Age (X_5)

Age had an appreciable effect on the attitude index. It directly accounted for 2.4 per cent of the variation in the index, older farmers having not so favorable attitudes toward credit as younger farmers. The credit attitudes of older farmers were formed in an era when little credit was needed or used and when the credit market was loosely controlled.

Education (X_6)

Little variation in attitudes could be explained by educational attainment. In fact, its effects were negative in orientation as higher

TABLE V

MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS OF THE ATTITUDE INDEX

Dependent Variable: Attitude Index (X_2)
Sample: 500 Farmers

	Independent variable	Gross correlation coefficient	Partial correlation coefficient	Partial regression coefficient	Significance of partials at level indicated
		r	$r_{2.m}$	$b_{2.m}$	
X_3	Deliberation index	.551	.307	.288	.001
X_4	Knowledge score	.535	.246	.066	.001
X_5	Age	-.127	-.167	-.010	.001
X_6	Education	.298	-.021	-.005	.35
X_7	Sales	.104	-.036	-.001	.20
X_8	Tenure status	-.182	-.111	-.139	.005
X_9	Per cent crop income	-.014	.017	.0003	.35
X_{10}	State area	-.126	-.120	-.118	.005
X_{11}	Per cent off-farm income	.027	.052	.001	.10

Coefficient of multiple correlation	$R_{2.m}$ = .62154.001, significant at	.001
Coefficient of multiple determination	$R^2_{2.m}$ = .38707, significant at	.001
Coefficient of non-determination	$K^2_{2.m}$ = .69370.001, significant at	.001
Regression constant	a = 2.29643	

TABLE VI

VARIANCE ANALYSIS OF THE REGRESSION EQUATION OF THE ATTITUDE INDEX

Dependent Variable: Attitude Index (X_2)
Sample: 500 Farmers

Symbol	Independent variable		Fraction of variability in attitude index accounted for
X_3	Deliberation Index		
	Direct association	$\beta^2_{23.m}$	.12005
	Indirect association:		
X_3X_4	Deliberation - Knowledge	$2(r_{34} \beta_{23.m} \beta_{24.m})$	.13145
X_3X_5	Deliberation - Age	$2(r_{35} \beta_{23.m} \beta_{25.m})$	-.00108
X_3X_6	Deliberation - Education	$2(r_{36} \beta_{23.m} \beta_{26.m})$	-.00475
X_3X_7	Deliberation - Sales	$2(r_{37} \beta_{23.m} \beta_{27.m})$	-.00604
X_3X_8	Deliberation - Tenure	$2(r_{38} \beta_{23.m} \beta_{28.m})$	.01957
X_3X_9	Deliberation - Per cent crop income	$2(r_{39} \beta_{23.m} \beta_{29.m})$	-.00020
X_3X_{10}	Deliberation - State area	$2(r_{3,10} \beta_{23.m} \beta_{2,10.m})$	.00204
X_3X_{11}	Deliberation - Per cent off-farm income	$2(r_{3,11} \beta_{23.m} \beta_{2,11.m})$	-.00217
X_4	Knowledge Score		
	Direct association	$\beta^2_{24.m}$	.08311
	Indirect association:		
X_4X_5	Knowledge - Age	$2(r_{45} \beta_{24.m} \beta_{25.m})$	.00278
X_4X_6	Knowledge - Education	$2(r_{46} \beta_{24.m} \beta_{26.m})$	-.00510
X_4X_7	Knowledge - Sales	$2(r_{47} \beta_{24.m} \beta_{27.m})$	-.00811
X_4X_8	Knowledge - Tenure	$2(r_{48} \beta_{24.m} \beta_{28.m})$	.00939
X_4X_9	Knowledge - Per cent crop income	$2(r_{49} \beta_{24.m} \beta_{29.m})$	-.00048
X_4X_{10}	Knowledge - State area	$2(r_{4,10} \beta_{24.m} \beta_{2,10.m})$	.01093
X_4X_{11}	Knowledge - Per cent off-farm income	$2(r_{4,11} \beta_{24.m} \beta_{2,11.m})$	-.00212
	Direct association:		
X_5	Age	$\beta^2_{25.m}$	.02428
X_6	Education	$\beta^2_{26.m}$	.00038
X_7	Sales	$\beta^2_{27.m}$	.00266
X_8	Tenure	$\beta^2_{28.m}$	.01119
X_9	Per cent crop income	$\beta^2_{29.m}$	.00017
X_{10}	State area	$\beta^2_{2,10.m}$	.01028
X_{11}	Per cent off-farm income	$\beta^2_{2,11.m}$	.00178
	Total explained variation		.40001
	Residual of explained variation		-.01294
	Coefficient of multiple determination	$R^2_{2.m}$	.38707
	Unexplained variation	$K^2_{2.m} = \frac{\sigma^2_{2.m}}{\sigma^2_2}$	.61370
	Total variation in X_2		1.00000

educated farmers were less in favor of credit than lower educated farmers, when other factors were held constant.

In its joint association with knowledge and deliberation, the effects of education were partially negated as higher educated farmers had more knowledge of credit sources and deliberated more about it, but they had less favorable attitudes toward credit and, as explained in the preceding chapter, used less of it.

The investigator has difficulty in offering a reasonable hypothesis as to why the better educated farmers should have less favorable attitudes toward credit, unless it should be that the better educated farmers came from wealthier families and received their present capital through inheritance rather than through credit investment. To speculate further would accomplish little for the significance level of the partial coefficient of education on attitude was quite low. There was a 35 per cent probability that this association was due to sampling chance. Even if this association is due to chance, it can still be said that education had little or no direct association with the attitudes farmers had about credit.

Sales (X_7)

Sales had a small reverse affect on attitudes. Although the farmers with higher sales did rate slightly higher on the attitude index than did farmers with lower sales, the partial coefficients of sales on attitudes were negative.

Sales as they influenced knowledge and further influenced attitudes did not contribute but subtracted from the explained variation of each.

Knowledge had less effect on the attitudes of the operators of large farms than it did on the attitudes of those who operated small farms. A similar situation existed with the joint effects of sales and deliberation. Larger farmers deliberated more but had less positive credit attitudes. Many large farmers probably inherited capital and had less personal need for credit, and thus, had more negative attitudes toward it.

Tenure Status (X_8)

Tenure accounted directly for 1.1 per cent of the variation in the attitude index, with owners having more favorable attitudes than renters or sharecroppers. Owners had more favorable attitudes and deliberated more about credit. Those negative attitudes toward credit on the part of sharecroppers and renters may be a reason why many are still sharecropping and renting.

Per Cent Income From Crops (X_9)

The per cent of income from crops had little or no effect upon attitudes about credit. Predominately livestock farmers had approximately the same level on the attitude index as did the predominately crop farmers.

State Area (X_{10})

West Tennessee farmers had more favorable attitudes than did East Tennessee farmers. Location in the state affected the attitude index, directly and indirectly through knowledge, each accounting for approximately 1 per cent of the variation in the index. Thus, there existed differences in internal capital rationing between areas of the state due to the more unfavorable attitudes of farmers in East Tennessee.

Per Cent of Off-Farm Income (X_{11})

The fact that a farmer had the urban influences of off-farm employment made little difference in his attitude toward credit. The average difference between farmers who received all or none of their income from the farm was just .1 point on the five point attitude index.[1]

Summary

The most favorable attitudes toward credit were held by a farmer who was younger, had little education, and owned a small farm in West Tennessee. The attitude index was highly correlated with the deliberation index and the knowledge score, but much of this association was probably due to the effect of attitudes on these factors rather than vice versa. There was little effect on farmers' attitudes from education, volume of sales, per cent of income from crops, or the per cent of income from nonfarm sources. The nine independent variables were associated with 39 per cent of the variability in the attitude index.

Specific Attitudes Toward Credit

The attitude index consisted of the interviewer's appraisal of many attitudes. The more significant responses will be discussed here in order to illustrate what attitudes made up the index and also what attitudes appear to be of such importance (or unimportance) as to influence (or not influence) farmer actions.

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[1] $b_{2,11.m} = .001$; $b(0\text{-}100) = (.001)(100) = .1$

Credit Stigmas

A small but significant number of farmers thought that there was a social stigma attached to the use of credit to the extent that borrowers were looked down on by their neighbors. There were 20.2 per cent who thought this was even sometimes the case (see Table VII). More farmers attached a stigma to credit in East Tennessee than they did in West Tennessee, confirming the results above that there is more internal attitudinal capital rationing in East Tennessee than there is in West.

Volume of Credit in Community

Ninety-three farmers thought that there was too much borrowing done in their community; 196 did not; and 196 said that they did not know how much borrowing was going on.

Thirty-two of the ninety-three farmers who thought there was too much borrowing going on thought that farmers were forced by economic conditions to borrow a lot in order to survive and operate their farms. Nineteen thought farmers were borrowing too much because farmers were in perpetual indebtedness, and fourteen thought that farmers were buying things on credit which they did not need.

Those who qualified their answers believed that some borrowed too much but some didn't borrow at all.

Eighty-four of the 196 farmers who did not believe farmers were borrowing too much thought that there was very little or no borrowing done in their community. Twenty-five thought that they had to borrow in order to survive on the farm. Combined with the farmers above who gave this answer, fifty-seven of the 500 farmers thought that borrowing was

TABLE VII

ANSWERS BY GEOGRAPHIC AREA TO THE QUESTION: "DO YOU THINK THAT FARMERS WHO BORROW MONEY ARE LOOKED DOWN UPON BY THEIR NEIGHBORS?"

State area	Number of farmers	Farmers answering: Yes		Sometimes		No		Don't know		No answer	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
West	150	7	4.7	11	7.3	112	74.7	17	11.3	3	2.0
Middle	190	12	6.3	21	11.1	144	75.8	12	6.3	1	0.5
East	160	24	15.0	26	16.3	102	63.8	7	4.3	1	0.6
Total	500	43	8.6	58	11.6	358	71.6	36	7.2	5	1.0

necessary in order to meet the operating costs of farming. Forty-four thought that farmers were not borrowing more than they could repay or use to their advantage, and twenty-one stated that farmers would be more successful if they borrowed even more. This last figure, however, was just 4.2 per cent of the farmers.

It was believed that older farmers would have this negative attitude toward the over-use of credit more than the younger farmers. This, however, did not seem to be the case. Eighteen (18) per cent of all the farmers thought that the farmers in their community were running too much of their business on credit, and 26 per cent of the farmers over seventy thought so. But 25 per cent of the farmers under thirty also thought so, the proportion being much smaller in the middle age groups.[2]

Credit Morality

Contrary to the investigator's original belief, there was very little feeling on the part of farmers that there was anything religiously immoral about the use of credit. Only six farmers, or 1.2 per cent, thought that there was anything morally wrong with borrowing money. Three more thought that it might be morally wrong in certain circumstances.

Credit Use and Farmer Independence

Fifty-two farmers said that when a farmer borrowed money he lost some of "his freedom to make his own decisions". Twenty-two more said

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[2]These beliefs were also associated with the amounts farmers borrowed. The extent to which these beliefs were a result rather than a cause of their borrowing practices must be left to the judgment of the reader.

that he might lose some decision making freedom, depending on where he borrowed it. Eighty-one said that they did not know if borrowers lost any freedom or not, and 340 said that they believed borrowers did not lose any of their independence when they borrowed money. More Negroes than whites thought that at least some freedom was lost.

Credit Use and Managerial Ability

When asked who they thought were better farm managers, borrowers or non-borrowers, 194 or 39 per cent of the farmers answered that they thought the non-borrowers were. Twenty-three per cent thought the borrowers were, and 35 per cent thought that either one may be the better manager, depending on the circumstances.

Farmers who thought that borrowers were the better farm managers achieved slightly higher knowledge scores than those who thought they were not the better farm managers. Those who said the borrowers were better scored an average of 8.6, while those who said the non-borrowers scored an average of 6.4. The farmers who answered that either might be better scored 8.4, approximately the same as those who thought the borrowers were better. The seventeen farmers who said that they did not know which group was the better farm managers scored 4.1.

Of the 115 farmers who thought borrowers were the better farm managers, sixty-one said that by borrowing farmers could operate their farms on a larger and more efficient basis and get ahead faster. Sixteen thought borrowing would make the farmer manage better and work harder in order to pay his debt obligations.

Of the 193 farmers who thought non-borrowers were the better managers, seventy-three thought that if a farmer could get along without borrowing, he must be a better manager, per se. Thirty-six others thought that farming was too risky and variable to borrow money on, and twenty-three farmers thought that non-borrowers were the better managers because they were more independent and could use their own ideas more.

The 174 farmers who said that either group might be the better managers thought that differences in circumstances would determine whether or not a farmer borrowed and whether or not such borrowing was good management practice.

Thus, farmers were somewhat prone to consider non-borrowers better managers than borrowers. Most farmers did not consider credit a productive tool, but a tool only to be used in emergencies or when there was no other means to operate their farms. Only a small percentage considered credit a means of increasing economic opportunity and profits. The answers to the questions indicated few extreme attitudes, either pro or con, toward credit. Farmers accepted the existence of credit, but they accepted it as a necessary evil to be used as sparingly as possible.

Consumer Credit

Farmers were asked if they thought farmers were justified in using consumer credit. The answers to this question by location in the state are listed in Table VIII. More West Tennessee farmers thought consumer credit was desirable than did East Tennessee farmers.

Sixty-one farmers said yes, that consumer credit was justified, and 175 said it was not justified. One hundred and fifty-nine farmers

TABLE VIII

ANSWERS BY GEOGRAPHIC AREA TO THE QUESTION: "DO YOU BELIEVE THAT A FARMER IS JUSTIFIED IN USING CONSUMER CREDIT? THAT IS, SHOULD A FARMER BORROW MONEY FOR THINGS TO BE USED IN THE HOME?"

State area	Number of farmers	Farmers answering: Yes		Qualified yes		Qualified no		No		Don't know	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
West	150	26	18	62	41	21	14	38	25	3	5
Middle	190	21	11	56	30	48	25	63	33	2	4
East	160	14	9	45	28	27	17	74	46	0	0
Total	500	61	12	163	33	96	19	175	35	5	1

qualified their answer in some manner, usually with respect to the necessity or emergency character of the good or service to be purchased.

The two most common reasons given by those who did not favor consumer credit were that consumer credit did not repay itself and "what a man can't afford, he doesn't need". Forty-eight per cent of the farmers who said they did not believe in consumer credit gave these reasons.

Sixty-one per cent of the farmers who thought consumer credit was justified thought a farmer was "just as justified in borrowing for those things as anything else" or else believed that by creating obligations they would have to meet, farmers could accumulate "things" faster.

Mortgages

Not one farmer stated that he did not believe a farmer was justified in borrowing money if he was "pretty sure" that a loan would increase his profits. Seven farmers did say that he would have to be "very sure" or that they did not know if he would be justified or not.

But when asked if he would still be justified if he had to give a mortgage on his livestock or crop in order to get a loan, 123 (25 per cent) said that he would not, and 202 (40 per cent) said that he would not be justified in giving a mortgage on his land (see Table IX).

This attitude that 40 per cent of the farmers had toward real estate mortgages was not a rational one. They could not give rational reasons for their beliefs. The word mortgage had a stigma of heavy indebtedness and imminent bankruptcy. To many farmers giving a mortgage

TABLE IX

NUMBER AND PER CENT OF FARMERS BELIEVING IT NOT JUSTIFIABLE TO GIVE A MORTGAGE BY TENURE STATUS AND STATE AREA

State area	Tenure status	Number of farmers	Number and per cent of farmers believing it not justifiable to give a mortgage on:			
			Livestock or crop		Real estate	
			Number	Per cent	Number	Per cent
West	Owner-operator	91	9	10.0	25	27.5
	Renter	30	4	13.3	12	40.0
	Sharecropper	29	3	10.3	9	31.0
Middle	Owner-operator	143	36	25.2	60	42.0
	Renter	22	4	18.2	9	40.9
	Sharecropper	25	10	40.0	15	60.0
East	Owner-operator	143	52	36.2	64	45.4
	Renter	8	2	25.0	4	50.0
	Sharecropper	9	3	33.3	4	44.5
Total		500	123	24.6	202	40.4

was the same as losing their farm, even though they realized that giving a mortgage didn't increase their legal obligation.

East Tennessee farmers had a more negative attitude toward mortgaging than West Tennessee farmers. There was little consistent variation in this attitude by farmers of different tenure statuses.

Factors Determining Deliberation About Credit

The deliberation index was the interviewer's appraisal of the amount of deliberation which the interviewee had made about credit, both as to its amount and source of use.

Although attitudes and knowledge are not mutually exclusive, they are, nevertheless, definable entities. Deliberation is not. Deliberation is a mental process and its relevance is derived from the beliefs in and between which it functions. Its only characteristic is its existence even though this existence may be relative and that other characteristics may derive from its applicable beliefs. For this reason, most discussion of the deliberation process will be included and discussed in reference to the other analytical variables. This section will restrict itself to those factors which appear to determine or associate themselves with deliberation.

The nine factors included in the correlation analysis had a coefficient of multiple determination with the deliberation of $R^2_{3.m} = .51480$ (see Table X). These factors were probably not all causal on deliberation, however. It is likely that because of the factual types of questions in the knowledge scale, deliberation did more to affect it than such

TABLE X

MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS OF THE DELIBERATION INDEX

Dependent Variable: Deliberation Index (X_3)
Sample: 500 Farmers

	Independent variable	Gross correlation coefficient	Partial correlation coefficient	Partial regression coefficient	Significance of partials at level indicated
		r	$r_{3.m}$	$b_{3.m}$	
X_2	Attitude index	.551	.307	.328	.001
X_4	Knowledge score	.658	.468	.134	.001
X_5	Age	.010	.039	.002	.20
X_6	Education	.351	.045	.012	.15
X_7	Sales	.169	.002	.00004	.001
X_8	Tenure status	-.267	-.147	-.195	.005
X_9	Per cent crop income	-.022	.053	.001	.05
X_{10}	State area	-.029	.112	.119	.005
X_{11}	Per cent off-farm income	-.074	-.091	-.002	.025

Coefficient of multiple correlation	$R_{3.m}$ = .71749, significant at	.001
Coefficient of multiple determination	$R^2_{3.m}$ = .51480, significant at	.001
Coefficient of non-determination $K^2_{3.m} = (1 - R^2_{3.m})$	= .48520, significant at	.001
Regression constant	a = .27834	

TABLE XI

VARIANCE ANALYSIS OF THE REGRESSION EQUATION OF DELIBERATION INDEX

Dependent Variable: Deliberation Index (X_3)
Sample: 500 Farmers

Symbol	Independent variable		Fraction of variability in deliberation index accounted for
X_2	Attitude Index		
	Direct association	$\beta^2_{32.m}$	.07366
	Indirect association:		
X_2X_4	Attitude - Knowledge	$2(r_{24} \beta_{32.m} \beta_{34.m})$	.14130
X_2X_5	Attitude - Age	$2(r_{25} \beta_{32.m} \beta_{35.m})$	-.00179
X_2X_6	Attitude - Education	$2(r_{26} \beta_{32.m} \beta_{36.m})$	.00631
X_2X_7	Attitude - Sales	$2(r_{27} \beta_{32.m} \beta_{37.m})$	.00010
X_2X_8	Attitude - Tenure	$2(r_{28} \beta_{32.m} \beta_{38.m})$	.01217
X_2X_9	Attitude - Per cent crop income	$2(r_{29} \beta_{32.m} \beta_{39.m})$	-.00027
X_2X_{10}	Attitude - State area	$2(r_{2,10} \beta_{32.m} \beta_{3,10.m})$	-.00581
X_2X_{11}	Attitude - Per cent off-farm income	$2(r_{2,11} \beta_{32.m} \beta_{3,11.m})$	-.00103
X_4	Knowledge Score		
	Direct association	$\beta^2_{34.m}$	.23673
	Indirect association:		
X_4X_5	Knowledge - Age	$2(r_{45} \beta_{34.m} \beta_{35.m})$	-.00078
X_4X_6	Knowledge - Education	$2(r_{46} \beta_{34.m} \beta_{36.m})$	.01718
X_4X_7	Knowledge - Sales	$2(r_{47} \beta_{34.m} \beta_{37.m})$	.00045
X_4X_8	Knowledge - Tenure	$2(r_{48} \beta_{34.m} \beta_{38.m})$	.01847
X_4X_9	Knowledge - Per cent crop income	$2(r_{49} \beta_{34.m} \beta_{39.m})$	-.00223
X_4X_{10}	Knowledge - State area	$2(r_{4,10} \beta_{34.m} \beta_{3,10.m})$	-.01546
X_4X_{11}	Knowledge - Per cent off-farm income	$2(r_{4,11} \beta_{34.m} \beta_{3,11.m})$	.00594
	Direct association:		
X_5	Age	$\beta^2_{35.m}$	.00067
X_6	Education	$\beta^2_{36.m}$	.00152
X_7	Sales	$\beta^2_{37.m}$	.00003
X_8	Tenure	$\beta^2_{38.m}$	.01519
X_9	Per cent crop income	$\beta^2_{39.m}$	.00138
X_{10}	State area	$\beta^2_{3,10.m}$	.00722
X_{11}	Per cent off-farm income	$\beta^2_{3,11.m}$	.00493
	Total explained variation		.51575
	Residual of explained variation		-.00095
	Coefficient of multiple determination	$R^2_{3.m}$	.51480
	Unexplained variation	$K^2_{3.m} = \frac{\sigma^2_{3.m}}{\sigma^2_3}$	
	Total variation in X_3		1.00000

knowledge did to affect deliberation. Nevertheless, the association was undoubtedly causal to some degree in each direction.[3]

Attitude Index (X_2)

Attitudes accounted directly for 7.4 per cent of variation in deliberation (see Table XI). Combined with knowledge it had a 14.1 per cent association with the variability in deliberation. As would be expected, those farmers with more favorable attitudes toward credit use, deliberated more about it.

Knowledge Score (X_4)

Directly, knowledge had a 23.7 per cent association with deliberation. Much of this was undoubtedly deliberation's effect on knowledge rather than knowledge's effect on deliberation. There were significant joint associations between knowledge and education, tenure, and state area on deliberation.

Age (X_5)

Age appeared to have little association with the deliberation index, directly or indirectly. The slight effect it did have was positive in that older farmers deliberated more about credit than younger farmers. This relationship, however, was not significant.

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[3]Statistically speaking, because of its inverse causation the knowledge scale should not have been included in the correlation analyses in Tables X and XI. But although the knowledge scale was composed of factual data about credit sources, it was highly associated with the higher knowledge farmers had about the theoretical relationships of credit phenomena. Such knowledge would be more causal on deliberation.

Education (X_6)

Education had small positive direct and indirect associations with deliberation. Its indirect associations with attitude and knowledge were higher than its direct. Formal education appeared to have little direct effect on the amount of deliberation which farmers put into their decisions about credit. The reason for this may again be inherited wealth in that the better educated farmers would likely be wealthier and less concerned with external sources of capital. But because of the scarcity of "wealthy" farmers in Tennessee, the reason may also be that there is too little emphasis on problem solving in the education system.

Sales (X_7)

Sales had extremely little effect on deliberation. The little it did have, however, had a very high level of significance.

Tenure Status (X_8)

Tenure was more important as a determinant of deliberation than it was of any of the other factors under investigation. Tenure directly accounted for 1.5 per cent of the deliberation index, owners deliberating more than renters or sharecroppers.

Indirectly, it accounted for another 1.2 per cent in its joint association with attitudes. Sharecroppers and renters had more negative attitudes and also deliberated less about credit.

The association of tenure and knowledge, however, contributed to a decrease in the amount of explained variation. Sharecroppers had slightly more knowledge (with other factors constant) but deliberated

less. In other words, sharecroppers used less deliberation in their credit decision making processes than did owners, but for one reason or another, they had more knowledge of it.

Per Cent of Income From Crops (X_9)

There was little association of the deliberation index with the per cent of a farmer's income which he received from crops. What variation this measure did account for was positive in that farmers with larger shares of their income from crops deliberated less about credit. Its gross correlation, however, was slightly negative.

State Area (X_{10})

The main effect of state area on the deliberation index was its effect as it jointly affected knowledge. This effect was negative, however, for with other factors constant farmers in East Tennessee deliberated more about credit than farmers in West, but they had less knowledge of credit.

This relationship exists probably because of the previously hypothesized conservatism of East Tennessee farmers and their shorter history of commercial credit use. The use of credit presents a greater attitudinal conflict to the more conservative East Tennessee farmers. West Tennessee farmers, whose cotton culture has largely been based on credit since the Civil War, act more habitually in the credit market and through their greater experience with credit have more knowledge of it. Their attitudinal conflict with credit is not so great, and hence, less deliberation is required to cue credit action.

Per Cent of Income From Off-Farm Sources (X_{11})

Part-time farmers did deliberate less about credit and had less knowledge about it than did full-time farmers. They had, however, more favorable attitudes about credit so the joint effect of attitudes and off-farm income in explaining the variation in deliberation was negative.

Summary

A very deliberative farmer was one who was older, well educated, and a full-time renter or sharecropper on a large East Tennessee livestock enterprise. Just as important as the total of these characteristics, however, was his general attitude toward credit. Deliberation was also highly associated with knowledge, probably causally. The nine variables explained 51.4 per cent of the variability in the deliberation index.

The Amount of Credit Deliberation

The previous section indicated the variation in farmers' scores on the deliberation index, i.e., the relative differences in deliberation between farmers. This section will attempt to show the level at which the deliberation index functioned, and in absolute rather than relative terms, show the amounts and effects of farmers' credit deliberations.

The 500 farmers were asked if in the preceding three years they had ever given serious thought to the expansion of their farm operation through the use of credit (or more credit if they were already using some). Just eighty-eight of the 500 farmers said that they had given serious thought to it. The reasons these farmers who had thought about

it gave for deciding against the use of credit was usually either they decided it would not pay or else they were still deliberating about it. Just three farmers stated that they had ever drawn up a farm expansion plan on paper.

Four hundred and sixteen farmers said they had not considered the use of (more) credit within the preceding three years.[4] The reasons they gave for not considering more extensive use of credit are listed in Table XII. One hundred and eighty-three farmers gave either age and health or a lack of interest in farming as their reason. It is probable that these farmers, 37 per cent of the state total, would not be interested in more credit unless they could be shown credit investments which would be labor saving. Most of them conceived of farm expansion as necessarily costing rather than saving time and labor.

Twenty-six per cent of the farmers who were already borrowing said that they had given serious thought to borrowing even more. Just 6 per cent of those who were not borrowing said that they had given any serious thought to borrowing.

To another question, 220 farmers said they thought credit or more credit could not increase the profits on their farm. The reasons they thought that it could not increase their profits are listed in Table XIII. The reasons they gave were either that they thought the marginal productivity of capital was too low to justify the cost and risk or that they were operating under labor supply limitations. In answering this question

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[4]Two farmers did not answer the question.

TABLE XII

REASONS 416 FARMERS GAVE FOR NOT GIVING "SERIOUS THOUGHT TO THE POSSIBILITIES OF EXPANDING (THEIR) FARM OPERATION THROUGH THE USE OF (MORE) CREDIT"

Reason	Farmers indicating reason who were:			
	Borrowers		Non-borrowers	
	Number	Per cent	Number	Per cent
Poor health or age.	48	22.1	78	39.4
Not interested in farming.	37	17.0	20	10.1
Not enough land of sufficient productivity to justify any credit investment.	16	7.3	7	3.5
Can't get labor and have all I can handle myself.	24	11.0	16	8.1
Should expand only as get the cash; if borrow got good chance of going broke.	14	6.4	13	6.6
No security to get enough credit.	14	6.4	4	2.0
Satisfied with what I have.	7	3.2	12	6.1
Don't know, never thought about it.	32	14.7	35	17.6
Other.	26	11.9	13	6.6
Total	218	100.0	198	100.0

TABLE XIII

REASONS 220 FARMERS GAVE FOR NOT BELIEVING (MORE) CREDIT COULD INCREASE THE PROFITS ON THEIR FARMS

Reason	Farmers indicating reason who were:			
	Borrowers		Non-borrowers	
	Number	Per cent	Number	Per cent
Poor health or age.	7	5.8	23	23.3
Not enough land of sufficient productivity to justify any credit investment.	22	18.2	21	21.2
Using all the credit now I can use safely.	9	7.5	2	2.0
Prices too low and costs too high.	20	16.5	21	21.2
Am operating farm to capacity now.	24	19.8	9	9.1
Can't get labor.	13	10.7	8	8.1
Others.	18	14.9	11	11.1
Don't know why not.	3	2.5	1	1.0
No answer.	5	4.1	3	3.0
Total	121	100.0	99	100.0

very few farmers considered the possibility of increasing profits through the purchase of more land. This may have been due to the wording of the question which asked farmers about increasing profits "on your farm".

Two hundred and two farmers said that they thought additional credit could increase their profits. But when asked why they did not use this additional credit, most of them reversed their answer by giving a reason why it would not increase their profits.

Some of the farmers did, however, give reasons other than non-profitability for not using credit. Twenty-two said that they were not interested in farming; thirty-one thought that, although it would probably increase profits, a credit investment would be too risky and that they "would rather be safe than rich"; nineteen said that they were still considering its use; and forty said that they just didn't know why they didn't use it. This last figure means that 8 per cent of the farmers never deliberated about using (more) credit even though they thought it could increase their profits. Nor had sufficient deliberation taken place in the past even to be able to offer a reason for such non-deliberative and non-economic action. Similar habitual behavior as applied to the selection of credit sources will be discussed in the next chapter.

Thus, deliberation about credit appeared to be quite low. As has been shown in this and the preceding chapter and as will be shown in subsequent chapters, deliberation is a major indirect determinant of credit action. Deliberation is a prerequisite to rational action, and it is only through rational action that man can best fulfill his purposes and resolve his conflicts (see Chapter II).

CHAPTER V

SUMMARY OF CREDIT SOURCES AND FARMERS' KNOWLEDGE OF SOURCES AND PRACTICES

Introduction to Chapter V

The decision of where to borrow and the decision of how much to borrow are interconnected to the extent that they depend on each other. Credit sources have a wide variance of interest rates and other loan characteristics. Some sources are quite specialized in the interest, length, and amount of loans which they offer. If capital is to be borrowed to the point where marginal credit cost equals marginal profit received (with provisions for risk), then the interest rate charged by the credit source, as it is reflected in marginal credit cost, should to a certain degree influence the amount to be borrowed. The requirements of the prospective investment, the amount of loan, and the time needed should in turn influence the selection of the source for a proposed loan.

These factors are requirements of efficient and economical borrowing practices. These requirements will be met as the beliefs determining farmers' borrowing practices are made beliefs of knowledge. However, a prerequisite even to knowledge of the practices and policies of loan sources is knowledge of their existence.

The 500 farmers interviewed in this study had at the time of interview 296 loans. More than one loan at one source was still counted as one loan. These 296 loans were held by 216 farmers who had at least one loan outstanding at the time of interview.

By the same loan counting procedure, 230 farmers had had at least one loan within the preceding three years which they had since paid off. These 230 farmers had a total of 318 past loans. The total number of farmers who had at least one loan at the time of interview and/or had repaid at least one loan within the past three years was 288. Thus, 212 of the farmers interviewed claimed to have done no borrowing outside of charge accounts within the preceding three years.

Much of the data concerning farmers' beliefs about sources are presented in the form patrons of sources or number of loans rather than in the form of the preceding chapters, number or per cent of farmers. This was necessary because the questions applied to the source which the farmer patronized, and as is mentioned above if he patronized more than one loan source, a questionnaire was taken for each loan. Thus, from 216 farmers there was information on 296 outstanding loans. From 230 farmers, who may or may not have been the same farmers, data was collected on 318 loans.

Ninety-eight percent (by volume) of the outstanding loans were with seven credit sources. These sources in order of volume of credit extended were commercial banks, private individuals, National Farm Loan Associations, Farmers Home Administration, dealer installment credit, Production Credit Associations, and insurance companies (see table XIV).

The extent to which farmers selected from these sources the one which maximally fulfilled their needs is a major subject of this paper. A short summary of the major available sources of credit is needed to support any thesis as to the quality of farmer beliefs and actions in the credit market. Summaries of the seven major credit sources follow.

TABLE XIV

VOLUME OF FARM CREDIT IN TENNESSEE BY VARIOUS SOURCES[a]

Source	Number of loans	Sample amount outstanding	Est. state total amount outstanding[b]	Per cent of total
		Dollars	Dollars	
P.C.A.	14	23,185	8,814,937	5.6
N.F.L.A.	20	81,200	30,872,240	19.7
Comm. bank	105	131,518	50,003,144	32.0
Comm. bank -dealer arranged	20	11,959	4,546,812	2.9
Insurance co.	4	18,000	6,843,600	4.4
Pvt. individual	41	68,129	25,902,646	16.6
Pvt. individual - relative	10	15,000	5,703,000	3.6
Dealer installment	68	24,592	9,349,878	6.0
F.H.A.	9	29,500	11,215,900	7.2
Other	5	8,358	3,177,712	2.0
Total	296	411,441	156,429,868	100.0

[a] Includes merchant installment credit but excludes charge account credit unless a written contract was involved. Seasonal fluctuation is partially eliminated as the field interviewing was done over a seven month period between August, 1956 and March, 1957.

[b] Excludes four urban counties: Hamilton, Knox, Davidson, and Shelby.

The Sources of Farm Credit

Commercial Bank

Although emphasizing short and intermediate term credit, banks furnish a larger portion of the farm credit in Tennessee than any other source. Interest rates are usually around six percent, often discounted in advance. For consumer credit financing, however, banks often set up monthly repayment plans which when combined with the interest discounting procedure result in appreciably higher true rates of interest. Banks are well distributed throughout the state and for most farmers there are several fairly convenient banks from which a selection may be made.

An associated feature of bank credit is the bank loan-dealer arranged. This type of credit is very common for machinery and appliance purchases and not at all rare on fertilizer and other types of purchases. Under this system the dealer through prior agreement with the bank either sends the loan to the bank which the bank automatically accepts using the merchandise purchased as collateral, or co-signs the loan with the purchaser at the bank as he makes the loan arrangements. Interest rates on dealer arranged bank credit are usually higher than for regular farmer-bank loans (see Table XV).

Private Individuals

Little is known about the lending activities of private individuals. They do extend a significantly large part of the farm credit in Tennessee but not, it appears, as large a proportion as they have in past years. During the field survey for this study, many farmers mentioned this decreasing role of the private lender.

TABLE XV

AVERAGE TRUE ANNUAL INTEREST RATES ON 296 OUTSTANDING LOANS IN TENNESSEE AT MAJOR FARM CREDIT SOURCES

Source	Number of loans	Average interest rate[a]	Interest at Percentile level .10	.50	.90
P.C.A.	14	6.7	6.3	6.8	7.0
N.F.L.A.[b]	20	4.0	4.0	4.0	4.0
Comm. bank	105	7.6	6.0	6.2	11.5
Comm. bank -dealer arranged	20	12.3	6.0	8.8	22.2
Insurance co.	4	4.2	4.0	4.0	4.5
Pvt. individual[c]	41	8.1	5.0	6.0	11.0
Pvt. individual -relative[c]	10	4.5	4.0	4.0	6.0
Dealer installment[c]	68	17.7	6.0	18.0	28.7
F.H.A.	9	4.7	4.0	4.5	5.0
Other	5	15.0	4.0	5.0	36.0

[a]Interest rate includes all service charges, but does not include loss of cash discounts, title search and lawyer fees, insurance, recording fees, or stock purchases.

[b]Rate has since been changed to 5 percent.

[c]Rate only includes those loans on which interest was charged.

As lenders, private individuals can be divided into three classes: relative lenders, landlords, and other investment lenders.

Relative lenders, that is, lenders akin to the borrower, make loans often bearing no interest and rarely interest in excess of 6 per cent. Father-son loans especially are usually non-interest bearing. Six of the ten outstanding loans with relatives involved no interest charges. Another common characteristic of such loans even when interest charges are present is the absence of a written agreement.

Landlords in the role of lenders are quite common in Tennessee especially in the cottom areas. Landlords sometimes extend non-interest bearing loans, but most landlord loans are for the tenant's short-term operation and bear surface interest rates of at least 6 percent. Often, however, goods are exchanged instead of cash and charges may be hidden in the price of the goods exchanged.

The other investment lenders consist of borrowers' friends and neighbors as well as the more wealthy people of the community looking for investments. These loans vary widely in their rates and terms and little generalization may be made about their quality as a source of farm credit.

National Farm Loan Association (N.F.L.A.)[1]

The National Farm Loan Association-Federal Land Bank System was organized in 1917 with the purpose of supplying to farmers long-term credit at reasonable rates of interest.

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[1]Information concerning the National Farm Loan Association was based on Farm Credit Administration, The Federal Land Bank System, How It Operates, Circular 55 (Washington: Government Printing Office), 1955.

The N.F.L.A.'s operate similarly to the Production Credit Associations in that a 5 per cent stock purchase is required. They differ in that at the present time most N.F.L.A.'s pay a dividend on this stock which cancels the interest on the money borrowed to pay for this stock.

At the time of the survey for this study, the interest rate was 4 per cent.[2]

Federal Land Bank loans require real estate mortgages, making substantial initial down payments quite common. But this initial cost is less significant when compared to the length of loan the Federal Land Bank offers, between five and forty years.

The National Farm Loan Associations are enabled by law to lend amounts up to $200,000. However, more practical limits are set by their collateral restrictions which limit loans to 57 per cent of the "normal value" of the real estate offered for security. Normal value is defined as the average price of the property over the preceding seven years. The Federal Land Bank is the initiator of the amortized loan and is the only organized long-term farm credit agency which allows repayment without penalty anytime during the loan contract.

There are twenty-one National Farm Loan Associations in Tennessee, all serviced by the Federal Land Bank of Louisville, Kentucky. The N.F.L.A.'s have no branch offices and the nearest loan office may be considerable distance away. Many associations, however, do have periodic contact points in stores spread throughout the hinterland.

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[2]In December, 1956, during the latter stages of the survey, this rate was raised to 4 and one-half per cent, and three months later raised again to 5 per cent.

Farmers Home Administration (F.H.A.)[3]

A federal agency administered by the United States Department of Agriculture, the Farmers Home Administration has operated under various names since 1933. Farmers Home Administration loans are supposed to be made only when farmers are unable to obtain adequate credit at reasonable rates and terms from other sources. The F.H.A. lends directly to farmers and also insures loans through private lenders.

The Farmers Home Administration offers five major types of credit; operating, farm ownership, soil and water conservation, farm housing, and emergency. The F.H.A. will not lend for many types of consumption purposes. Depending on the purpose the interest rates are from 4 to 5 per cent, except for emergency loans which only apply when the area is pronounced a farm disaster area by the President. The interest rate on emergency loans is 3 per cent. The terms and maximum sizes of loans also depend on the purpose with a maximum term of forty years and the amount not to exceed 90 per cent of the "fair and reasonable value of the farm" for insured loans and 100 per cent for direct loans.

Loans from the F.H.A. also have a supervisory character as all farm expense checks must pass through the county supervisor's office. Assistance is also given borrowers in preparing farm production and operating plans and in keeping records. An F.H.A. contact point or office is in every Tennessee county.

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[3]Information concerning the Farmers Home Administration was based on U. S. Department of Agriculture pamphlets, Farm Ownership Loans, PA 62, 1956, and Thumbnail Sketch of the Farmers Home Administration, 1956.

Merchant and Dealer Credit[4]

The most common type of dealer credit is the charge account or "open book" credit for which there is usually no interest charged, at least for the first thirty or sixty days. Some dealers charge a small rate of interest after this time. Charge account credit is convenience credit and is usually repaid within the allowable time.

Because its purpose as credit is convenience rather than economic production or consumption, charge accounts were only investigated to a small degree in this paper. The most important economic aspect of charge account credit is that in some cases a cash discount may be lost.

Becoming popular is dealer installment credit which differs from charge account credit in that it involves a formal written contract. The buyer has the use of the goods but does not receive actual title until the goods are completely paid for. Repayment terms are usually set up for less than two years but on occasion will extend three or even five years. Interest rates on this type of credit are among the highest, partly due to the installment repayment plan and partly due to the difficulty of buyers in determining what the actual true rate of interest is. The true annual interest rates usually range between 11 and 25 per cent and occasionally higher (see table XV). Also on occasion, no interest at all is charged. In addition to the interest rate, the cost effects of the loss of a cash discount may run anywhere between 2 and 25 per cent of the cash price of the item.

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[4]Information on dealer credit was based on Ruby Craven, Family Business Matters, Circular No. 144 (Rockhill, S. C.: South Carolina Extension Service, 1952), p. 2.

The main attributes of dealer installment credit are its convenience and the creation of bargaining power with the seller to keep the merchandise involved in good repair. Almost all appliance and machinery dealers offer installment credit with practically no upper limit. There is no risk to the merchant as he retains title to the merchandise. In fact, in cases of default and repossession the dealer may actually make a profit.

Dealers who do not have the necessary capital themselves for this type of financing usually procure it in one of two ways. They either borrow the money from the bank at a lower rate of interest than they charge their customers, or they use a financing plan offered by their manufacturer or one of the various commercial concerns set up for this purpose. Sometimes, they have the farmer deal directly with the bank. These instances are discussed above under commercial bank.

Production Credit Association (P.C.A.)[5]

A quasi-government but almost completely farmer owned (in Tennessee) credit cooperative, the Production Credit Associations have been extending short-term credit to farmers since 1933. Although operating under a permissive policy of 3 year loans, most P.C.A. loans are for a one year duration.[6]

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[5]Information concerning the Production Credit Association was based on Farm Credit Administration pamphlets, What You Want to Know About Your Production Credit Association, and Twentieth Anniversary, The Production Credit System.

[6]Permitted to make 5 year loans for capital investment purposes since January 1, 1957.

There are nine Production Credit Associations in Tennessee, all operating from the Federal Intermediate Credit Bank in Louisville, Kentucky. Interest charges are usually 6 per cent with an additional service charge of 1 per cent or less, the interest and service charges varying slightly from association to association. The associations only charge interest for the time the borrower has the loan which makes their advertised rate of interest an actual true annual interest rate.

Membership and ownership of stock (to the extent of 5 per cent of the loan) in the association is a prerequisite to borrowing from the P.C.A. If the advantages of ownership and self-management are not considered, this 5 per cent stock ownership (on which dividends are not paid) makes the actual interest charges roughly comparable to the interest discounting procedure commonly used by banks.

There are no restrictions on the purposes for which the Production Credit Associations may lend money. Also pertinent to the P.C.A.'s is their "line of credit" or "budgeted loan" which sets up an account for the farmer from which he can draw as needed.

There are for each of the nine associations in Tennessee four or five branch offices or contact points. Although P.C.A. contact points are more numerous than those of the N.F.L.A., not every county is served and a prospective borrower might have considerable distance to travel to contact the P.C.A.

Insurance Company

Insurance company loans comprise a small but significant part of the real estate mortgage debt in Tennessee. Interest rates are among the

lowest (usually 4 per cent) with liberal amounts extended for long terms (most commonly between ten and twenty-five years). Similar to other long term credit sources, there are often substantial initial charges.

Loans are usually set up under rigid terms and may only be repaid as payments are due. Although insurance companies may lend larger amounts with the same security than will the Federal Land Bank, they are far less flexible in their dealings with farmers. Companies do occasionally have representatives in rural areas, but most loans are handled through field agents or direct with an insurance company office in an urban center. Insurance companies do a minimum of farm loan advertising and may be the most difficult of all types of lenders for farmers to contact and arrange loans.

Others

Other sources of credit used by farmers are of little significance in the farm credit picture in Tennessee. They include finance companies, credit unions (through off-farm jobs), G. I. loans, and Federal Housing Administration loans. When added together they consist of just 2 per cent of the total debt load of Tennessee farmers (see table XIV).

Factors Determining Farmers' Knowledge of Credit Sources

The construction of the knowledge scale was related in previous chapters. The purpose of the scale was to measure the range of farmers' knowledge of credit source alternatives. The distribution of farmers on the scale is listed in Appendix A, Table III.

This section is concerned with the causal factors which determine farmers' knowledge of loan sources. That such knowledge was important in influencing credit action was illustrated in Chapter IV. Analyses of regression and variance similar to those which were done in the two previous chapters were done with the knowledge score as the dependent variable. The nine variables accounted for 54.5 per cent of the variability in the knowledge score (see table XVI).

Attitude Index (X_2)

Attitudes were important in their direct and indirect influence on farmers' knowledge of sources (see Table XVIII).[7] They were, however, not nearly so important as deliberation (see Table XVII). Although the attitude index accounted directly for 4.4 per cent of the variation in the knowledge score, in its joint association with deliberation, attitudes accounted for another 10.3 per cent of the variation. Deliberation resulted in more positive attitudes about credit and in the gathering of more information about credit. This high level of joint association tends to support the thesis proposed in Chapter II that deliberation is the catalyst by which attitudes can function.

Conversely to their influence on the amounts farmers borrowed, the joint association of attitudes and age subtracted slightly from the explanatory power of attitudes on knowledge. Older farmers had less positive attitudes about credit, but they had slightly more knowledge of credit sources.

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[7] $r_{43.m} = .468$: $r_{42.m} = .246$.

TABLE XVI

MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS OF THE KNOWLEDGE SCORE

Dependent Variable: Knowledge Score (X_4)
Sample: 500 Farmers

	Independent variable	Gross correlation coefficient	Partial correlation coefficient	Partial regression coefficient	Significance of partials at level indicated
		r	$r_{4.m}$	$b_{4.m}$	
X_2	Attitude index	.536	.246	.914	.001
X_3	Deliberation index	.658	.468	1.630	.001
X_5	Age	-.031	.091	.020	.02
X_6	Education	.453	.283	.266	.001
X_7	Sales	.273	.122	.008	.005
X_8	Tenure status	-.154	.055	.254	.10
X_9	Per cent crop income	-.064	-.076	-.005	.05
X_{10}	State area	-.187	-.166	-.613	.005
X_{11}	Per cent off-farm income	-.087	-.027	-.002	.30

Coefficient of multiple correlation	$R_{4.m}$ = .73857, significant at	.001
Coefficient of multiple determination	$R^2_{4.m}$ = .54546, significant at	.001
Coefficient of non-determination $K^2_{4.m}$ = $(1 - R^2_{4.m})$ = .45454, significant at		.001
Regression constant	a = .77285	

TABLE XVII

VARIANCE ANALYSIS OF THE REGRESSION EQUATION OF THE KNOWLEDGE SCORE

Dependent Variable: Knowledge Score (X_4)
Sample: 500 Farmers

Symbol	Independent variable		Fraction of variability in knowledge scores accounted for
X_2	Attitude Index		
	Direct association	$\beta^2_{42.m}$	.04369
	Indirect association:		
X_2X_3	Attitude - Deliberation	$2(r_{23}\ \beta_{42.m}\beta_{43.m})$	.10341
X_2X_5	Attitude - Age	$2(r_{25}\ \beta_{42.m}\beta_{45.m})$	-.00379
X_2X_6	Attitude - Education	$2(r_{26}\ \beta_{42.m}\beta_{46.m})$	.02964
X_2X_7	Attitude - Sales	$2(r_{27}\ \beta_{42.m}\beta_{47.m})$	.00411
X_2X_8	Attitude - Tenure	$2(r_{28}\ \beta_{42.m}\beta_{48.m})$	-.00337
X_2X_9	Attitude - Per cent crop income	$2(r_{29}\ \beta_{42.m}\beta_{49.m})$	.00029
X_2X_{10}	Attitude - State area	$2(r_{2,10}\beta_{42.m}\beta_{4,10.m})$	.00635
X_2X_{11}	Attitude - Per cent off-farm income	$2(r_{2,11}\beta_{42.m}\beta_{4,11.m})$	-.00022
X_3	Deliberation Index		
	Direct association	$\beta^2_{43.m}$	.20156
	Indirect association:		
X_3X_5	Deliberation - Age	$2(r_{35}\ \beta_{43.m}\beta_{45.m})$	.00064
X_3X_6	Deliberation - Education	$2(r_{36}\ \beta_{43.m}\beta_{46.m})$	.07499
X_3X_7	Deliberation - Sales	$2(r_{37}\ \beta_{43.m}\beta_{47.m})$	.01433
X_3X_8	Deliberation - Tenure	$2(r_{38}\ \beta_{43.m}\beta_{48.m})$	-.01061
X_3X_9	Deliberation - Per cent crop income	$2(r_{39}\ \beta_{43.m}\beta_{49.m})$	.00097
X_3X_{10}	Deliberation - State area	$2(r_{3,10}\beta_{43.m}\beta_{4,10.m})$	.00314
X_3X_{11}	Deliberation - Per cent off-farm income	$2(r_{3,11}\beta_{43.m}\beta_{4,11.m})$	.00128
	Direct association:		
X_5	Age	$\beta^2_{45.m}$	.00509
X_6	Education	$\beta^2_{46.m}$	.05662
X_7	Sales	$\beta^2_{47.m}$	.00892
X_8	Tenure	$\beta^2_{48.m}$	.00196
X_9	Per cent crop income	$\beta^2_{49.m}$	.00243
X_{10}	State area	$\beta^2_{4,10.m}$	.01454
X_{11}	Per cent off-farm income	$\beta^2_{4,11.m}$	.00037
	Total explained variation		.55634
	Residual of explained variation		-.01088
	Coefficient of multiple determination	$R^2_{4.m}$	.54546
	Unexplained variation	$K^2_{4.m} = \frac{\sigma^2_{4.m}}{\sigma^2_4}$	.45454
	Total variation in X_4		1.00000

TABLE XVIII

FARMERS AVERAGE KNOWLEDGE SCORES BY GENERAL ATTITUDE INDEX AND STATE AREA

State area	Attitude index	Number of farmers		Average knowledge score
West Tennessee	Strongly in favor	15		14
	In favor	75		10
	Undecided	42		6
	Against	10		5
	Strongly against	8		3
Middle Tennessee	Strongly in favor	11		13
	In favor	77		9
	Undecided	59		6
	Against	77		5
	Strongly against	11		4
East Tennessee	Strongly in favor	2		13
	In favor	68		8
	Undecided	59		6
	Against	27		5
	Strongly against	4		5
Total		500	Average	7.5

The attitude index-education jointness indirectly increased the amount of explained variation in the knowledge score by almost 3 per cent. Knowledge of sources was increased by education through its favorable effect on attitudes.

Deliberation Index (X_3)

Deliberation was the single most important factor influencing the knowledge score. In its direct and indirect effects it was associated with knowledge to the extent of accounting for 39 per cent of the variation in the knowledge score. Directly it accounted for slightly more than 20 per cent of the variation. As it was influenced by education it accounted for another 7.5 per cent of the variation. There was also a small positive indirect effect with sales and a negative one with tenure.

Considering the direct effects only, an increase in one point on the deliberation scale would cause an increase in 1.6 points on the twenty-one point knowledge scale. A comparable increase in the attitude index would cause less than a one point increase in the knowledge scale.[8]

Age (X_5)

Age appeared to have very little effect, direct or indirect, on farmers' knowledge of credit sources. What little it did have was positive in that older farmers had slightly more awareness of credit sources than younger farmers.

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[8] $b_{43.m} = 1.630$; $b_{42.m} = .914$.

Education (X_6)

In spite of its negative association with the amounts farmers borrowed, education was a very important determinant of farmers' knowledge of credit sources. Considering the direct association alone, education accounted for 5.6 per cent of the variation in the knowledge score. It accounted for another 10 per cent through its joint effects on attitude and deliberation. Table XIX lists the average knowledge scores of farmers who achieved various educational levels.

Sales (X_7)

Despite the high joint relationship of sales and knowledge on the amount borrowed, sales had little effect on knowledge. This measure of size of farm accounted directly for less than 1 per cent of the variation in knowledge scores and a $100 increase in sales would result in just a .008 point increase in the knowledge score.[9] Sales had a joint association with deliberation accounting for 1.4 per cent of the variation, the operators of large farms deliberating and procuring more knowledge about credit.

Tenure Status (X_8)

Although tenure had little effect on knowledge, it was significant because the effect it did have was reverse from what had been originally hypothesized. Owners deliberated somewhat more about credit than did sharecroppers, and they also had slightly more knowledge of credit. But

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[9] $b_{47.m} = .008$.

TABLE XIX

FARMERS' AVERAGE KNOWLEDGE SCORES AT ALL LEVELS OF EDUCATION

Last grade of school completed	Number of farmers		Average knowledge score
0	25		5.4
1	11		4.5
2	16		4.4
3	37		5.4
4	49		6.2
5	48		6.6
6	37		7.2
7	43		7.1
8	103		7.8
9	18		9.8
10	18		8.0
11	21		9.8
12	55		10.7
College: 1 year	8		8.5
College: 2 years	2		10.0
College: 3 years	2		11.0
College: 4 years or more	7		14.3
Total	500	Average	7.5

their knowledge was in spite of, not because of, their tenure status. The gross correlation of tenure status with knowledge was negative, but its partial correlation was positive.[10] Thus the causal effect of tenure was toward sharecroppers having more knowledge about credit than farm owners, even though in absolute terms, the owners had the higher level of credit knowledge.

Twenty-seven and four-tenths per cent of the sharecroppers were Negroes. Although Negroes and whites achieved approximately the same average knowledge scores, Negroes made slightly higher scores when compared by tenure status (see Table XX). This relationship existed because just 9 per cent of the whites were sharecroppers while 51 per cent of the Negroes were sharecroppers. The group which achieved the highest knowledge scores were the Negro owners; the lowest, the white sharecroppers. Because of the Negroes' lesser amount of inherited wealth, a Negro who achieved ownership status would most likely have to use extensive amounts of credit, which would explain his better knowledge of credit.

Per Cent of Income from Crops (X_9)

This measure appeared to have no more influence on knowledge than it did on the amount borrowed. It had very slight effect, directly or indirectly.

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[10] $r_{48} = -.154$; $r_{48.m} = .055$.

TABLE XX

FARMERS' AVERAGE KNOWLEDGE SCORES BY RACE AND TENURE STATUS

Race	Tenure status	Number of farmers		Average knowledge score
White	Owner-operator	366		7.8
	Renter	49		7.7
	Share cropper	40		5.4
Negro	Owner-operator	11		9.1
	Renter	11		8.9
	Share cropper	23		6.1
Total		500	Average	7.5

State Area (X_{10})

State area accounted for 1.4 per cent of the variation in the knowledge score. The reason is probably simply that more West Tennesseans used credit and they used more of it than Middle or East Tennesseans. Table XXI shows the differences in knowledge scores between those farmers who did and those who did not borrow in the three areas of the state. It can be seen that West Tennessee non-borrowers had about the same knowledge level as the East Tennessee borrowers.

This, however, does not explain why in Middle Tennessee, an area which had an even lower percentage of farmers borrowing than East Tennessee, the farmers should have average knowledge scores almost comparable to the high borrowing West Tennessee farmers. Even though fewer farmers in Middle Tennessee borrowed, the average borrowing per farmer ($882) in Middle Tennessee was higher than the average borrowing per farmer ($818) in East Tennessee. Sampling error might also be a factor as the randomness of the sample appeared to select a greater number of the more industrialized and urbanized counties in East Tennessee than it did in Middle Tennessee.

Per Cent of Income from Off-Farm Sources (X_{11})

It was thought that farmers whose main source of income was not their farm business would not have as much interest in or knowledge of farm credit sources. This was true to a degree so slight as to be significant only at the .30 level.

A possible reason for this low value is that many of the part-time farmers may have been potential full-time farmers in that they

TABLE XXI

DIFFERENCES IN KNOWLEDGE SCORES BETWEEN FARMERS WHO HAD AND WHO HAD NOT BORROWED WITHIN A THREE-YEAR PERIOD BY STATE AREA

State area	Borrowing status	Number of farmers	Average knowledge score
West	Borrowers	104	9
	Non-borrowers	46	7
Middle	Borrowers	88	9
	Non-borrowers	102	6
East	Borrowers	96	7
	Non-borrowers	64	6

were attempting to supplement their income until they could reach such size as to farm full time. This type of farmer would be interested and acquainted with credit sources even though just a small percentage of his income came from the farm.

Summary

A farmer with a high knowledge of credit sources would most likely be an older farmer, highly educated, and renting or sharecropping a large farm in West Tennessee. More important than these factors, however, would be his attitudes toward credit and the amount of deliberating he did about it.

The nine factors under investigation accounted for 54.5 per cent of the variation in farmers' knowledge scores.

Knowledge of Credit Source Alternatives

Many farmers appeared to have little conception of the range of credit sources available to them. When a loan was under consideration extremely few farmers had knowledge of more than two alternatives from which to make a selection. Many farmers had knowledge of just one source, and a very considerable number had none.

Every one of the 500 farmers was asked the question: "If you desired a $500 loan for one year or less for your farm operation, to what credit source would you apply?" The answers to this question and the reasons given for the answers are listed in Appendix A, Table V. Forty-two farmers said that they did not know where they would go for such a loan.

A similar question was asked for a long-term loan. 182 farmers said they did not know where they would go, and most of them said or intimated that they didn't know of any loan source at which they thought they could get the type of loan in question (see Appendix A, Table V).

A surprisingly large percentage of the farmers who did give a source gave as their reason that for one reason or another they considered it their only alternative. 40.1 per cent of the farmers gave this reason for a short-term source. This included 15 per cent who stated that it was the place they thought they were most likely to receive a loan, and 12 per cent who said that they did not know of any other source. To the comparable question on long-term credit, a smaller percentage of farmers gave only alternative as the reason for their credit source selection. This was probably because there were 141 fewer farmers who gave a long-term source as who gave a short-term source, and the large group who had short-term possibilities limited to one probably had long-term possibilities limited to zero. But only alternative was still given as a reason by 27 per cent of the farmers who mentioned a long-term source. This 27 per cent again included 7.5 per cent who responded that it was the only or most likely source at which they could get a loan, and 13.5 per cent who stated that they knew of no other source which gave long-term loans.

When the borrowers were asked what factors they liked about the loans they had outstanding, many similar answers were given.

For forty-three of the 296 outstanding loans the answer was that they had not been turned down. For nineteen others the statement was made that there wasn't anything they "especially" liked. The mere fact that a loan was granted seemed sufficient justification to patronize a credit source.

These answers would be justified if there were evidence of serious external capital rationing. But most capital rationing appeared to be internally created by farmers' lack of knowledge of its availability. The forty-two farmers who said that they did not know where they would go for a short-term loan scored an average of 4.8 on the knowledge test. The 182 who said they did not know where they would go for a long-term loan scored 5.8. These figures are 2.7 and 1.7 points below the 500 farmer average. Of the farmers who did mention a short-term source, those who said that it was the one at which they thought they were most likely to get a loan scored an average knowledge score of just 6.5 and those who said that it was the only source they knew of scored 5.5. Similar results occurred for long-term loans.

Farmers alternative possibilities for credit were very limited, but they were limited by their own lack of knowledge of them.

Knowledge of Specific Source Alternatives

Many farmers did not appear to have knowledge of the existence of some of the farm credit agencies. Some indications of their awareness of the various agencies can be gained from their answers to the specific questions on the knowledge scale in Appendix A, Table I. Just 40 per cent knew that insurance companies ever made farm loans, barely 10 per cent knew that the initials P.C.A. stood for the Production Credit Association (and these initials are the associations' name in their advertising programs). Twenty-four per cent knew of an office at which they could obtain a loan from the P.C.A., and 30 per cent knew of an office of the National Farm Loan Association. Forty-two per cent answered that they thought there was a government agency which made loans to farmers who could not get adequate credit elsewhere, but only 11 per cent knew the name of the agency, the Farmers Home Administration.

There was a popular misconception among farmers about which sources were and were not government agencies. When asked where they would go for long-term loans, forty-two farmers stated that they would go to the government. On probing it was found that seventeen of these farmers really meant a National Farm Loan Association, and five were thinking of the Farmers Home Administration. For the other twenty farmers it was not possible to determine what agency they were thinking of when they said "Government". This misconception is probably even more common than is indicated here for any farmer who did not believe in "government lending" would not have mentioned the government, or any agency he thought was associated with the government, as a desirable source of credit.

The farm credit cooperatives were less well known than the banks, probably because of their younger age and fewer number of contact points. It would be expected that only farmers with a fairly high level of knowledge about their credit source alternatives would have the opportunity to make contact with the lesser known credit cooperatives. A similar case would be expected for insurance companies.

Table XXII gives the average knowledge scores of the patrons of each of the major credit sources. Farmers who patronized certain sources achieved significantly higher scores on the knowledge scale than those who patronized other sources. The highest scores by sources were achieved by P.C.A. and N.F.L.A. borrowers. Their average scores of 13 and 14 were approximately 20 per cent higher than the scores of the bank borrowers, and 30 per cent higher than those who used dealer installment credit or dealer arranged bank credit. Insurance company and Farmers Home Administration borrowers scored not quite as high as the borrowers from credit cooperatives but higher than the bank borrowers. Installment credit users, whose knowledge was among the lowest, would in most cases have this credit offered to them by the dealer, even if they did not apply for it first. Little knowledge was needed to contact them. But as the interest rates on this type of credit are the highest of all sources, it appears that many might patronize dealer credit because of limited knowledge of alternatives.

The differences between the knowledge scores of the patrons of each source were even more extreme when each patron's score was counted only if he used that source as his major source of short, intermediate,

TABLE XXII

FARMERS' AVERAGE KNOWLEDGE SCORES BY THE SOURCES OF CREDIT WHICH THEY PATRONIZED

Source	Avg. knowledge score of farmers using sources for:				
			Major source[a]		
	Outstanding loans	Past loans	Short-term	Intermediate term	Long-term
P.C.A.	13.8	14.3	14.5	-	-
N.F.L.A.	13.4	14.0	-	-	13.2
Commercial bank	9.2	9.5	9.4	9.3	8.8
Commercial bank-dealer arranged	7.1	5.7	5.9	5.3	-
Insurance company	12.0	-	-	9.0	13.0
Finance company	-	7.5	6.0	-	-
Pvt. individual	8.3	7.5	6.9	7.1	8.6
Pvt. individual-relative	9.6	6.8	5.8	6.7	12.8
Dealer installment	7.6	8.4	6.6	8.3	10.0
F.H.A.	11.8	10.3	9.0	12.0	10.5
Other	10.2	12.0	11.0	13.0	7.5
No source used	6.5	6.4	6.5	7.4	7.1
Average knowledge score, all farmers		7.5			

[a]Major source was defined as the source at which a farmer had his largest (or only) short (one year or less), middle (more than one year but less than five years), and long (five years or longer) term loans.

or long term credit. Each borrower was counted under the sources at which he had his largest short, intermediate, and long term loans (see Appendix A, Table IV).

For almost all sources, the patrons' average knowledge score was higher than the 500 farmer average which included the non-borrowers. Those farmers who had no loans outstanding scored an average of 6.5, or one point below the average of all farmers.

Appendix Table VI summarized the percentages of right answers for four groups of farmers; the patrons of the source referred to in the question, the non-patrons of the referred to source, those who were non-patrons of the referred to source but who borrowed elsewhere, and those who did not borrow anywhere.

As expected, the patrons of the referred to source had the highest percentages of right answers. This was especially true of the lesser known farm credit cooperatives and insurance companies. The one exception was the users of dealer installment credit who had a lesser knowledge of such credit than those who used some credit but not dealer installment credit. This is grounds for a possible presumption that as farmers receive more knowledge about dealer installment credit, the less they use of it.

Farmers who did not borrow anywhere gave very small percentages of right answers. This was probably due to the lack of interest of non-borrowers in credit sources. A farmer who does not plan to borrow will not make much effort to seek information about loan sources, nor will he give such information much attention even if it is brought to him. The

knowledge scale might be considered biased to the extent that a farmer who patronized a credit source should have good knowledge of at least one source merely through its use. This bias was negated by the assumption that he must have had at least some previous knowledge of the source before applying to the source for a loan.

Thus the evidence further indicates that farmers' credit alternatives were seriously limited by their lack of knowledge of the alternatives. Many farmers appeared not to have knowledge of even the existence of many credit sources. Not only does this limit their credit possibilities, but it also limits their source alternatives for comparative or evaluative purposes. Farmers' ipso facto knowledge of their credit alternatives limited their choice even before any consideration of their desirability was made. As there was little knowledge of many of the lower interest rate sources, the portion of the credit market to which limited knowledge restricts them is probably not the most desirable portion.

It should be noted that efforts to furnish better quality credit to farmers are of little avail, if additional efforts are not made to educate them of its existence.

Deliberation About Sources

In spite of their limited knowledge of source alternatives, farmers appeared to make little effort or even have an interest in improving their knowledge of credit sources.

Of the borrowers who had given only alternative as the reason for which they patronized their particular credit source, just 13 per cent

stated that they had actually "seriously considered" any other source for their loan. For just thirty of the 296 outstanding loans did the borrowers say they had considered other possible sources before taking their present loans, and just eighteen (6 per cent) of the loans did they say were ever refused at some other source.

The holders of the 266 loans who said they had not considered another source were asked why they had not considered any other source. The results to this question are listed in Table XXIII. Such results illustrate the difficulty which people have in explaining their own non-deliberative or habitual behavior. If they could give reasons for such behavior, such behavior would not be habitual. It is probable that those farmers who did give an explanation other than a repetition of their non-deliberativeness were not acting as habitually as the others; i.e., a deliberative decision on credit sources was made in the more recent past, and the attitudes which determined that decision were still fresh in their minds.

It does not appear, however, that this habitual behavior was based on sound past judgments of knowledge. The next section will show some results of this habitual and uninformed behavior.

Farmers' Knowledge of and Deliberation About Interest Rates

The preceding sections of this chapter dealt mainly with farmers' knowledge of credit sources, ipso facto. This section will deal with his knowledge of the interest rates at the various farm credit sources and his understanding of how such rates were calculated.

TABLE XXIII

REASONS GIVEN BY FARMERS IN REGARD TO WHY THEY HAD NOT CONSIDERED ANY OTHER SOURCE BEFORE TAKING THEIR PRESENT LOAN

Reason	Loans for which reason was given	
	Number	Per cent
Easier and more convenient here.	89	33
Received good service in past.	30	12
Knew could get it here; didn't need to look at any other.	28	11
Don't know, no particular reason.	35	13
Don't know of any other source.	23	9
Thought this about as good as I could do.	14	5
Lowest interest here.	11	4
Was advised that this was a good place to borrow.	9	3
Other.	19	7
No answer.	8	3
Total who said they did not consider any other source.	266	89.9
Total who said they did consider another source.	30	10.1
Total number of loans.	296	100.0

TABLE XXIV

ANNUAL INTEREST RATES FARMERS BELIEVED THAT THEY WERE PAYING COMPARED TO THE TRUE ANNUAL INTEREST RATES THEY WERE ACTUALLY PAYING

296 Loans

Interest rate farmers reported	Number of loans	Average true interest rate	No true rate available	True annual interest rate: 0	.1-5.9	6.0-6.9	7.0-8.9	9.0-12.9	13.0-19.9	20.0-29.9	30.0-39.9	40.0-49.9	Over 50
0.0	16	0.0	8	8									
3.0	1	5.5			1								
4.0	30	4.0			30								
4.5	5	3.0			4		1						
5.0	14	5.4	1		8	3	2						
5.5	1	6.5				1							
6.0	138	9.1	14		2	91	3	12	6	6	3	1	
8.0	13	9.3	1			1	8	2	1				
10.0	8	11.3						7		1			
11.0	1	19.0							1				
12.0	1	12.0								1			
"Don't know"	68	15.9	16		1	6	6	11	17	7	2	1	1

Farmers had very little knowledge of the practices of various sources, as can be evidenced from the knowledge scale questions (see Appendix A, Table I). Just 26 per cent knew that insurance companies specialized in long-term loans; 20 per cent knew within a 2 point range the actual interest rate of the National Farm Loan Association; less than 10 per cent knew the rate within the same range for the Production Credit Association, and just 6 per cent of those who did not patronize the P.C.A. knew this interest rate (see Appendix A, Table IV).

Knowledge of Interest Rate Calculation

A lack of knowledge of the interest rates at sources which a farmer does not patronize may be a serious hindrance to his economic and productive usage of credit. But a lack of knowledge of interest rates at other sources is not nearly so serious as a lack of knowledge of the interest rates at sources which he does patronize, and many farmers did not have such knowledge.

Table XXIV lists for the 296 outstanding loans the interest rate which the farmer believed he was paying and the actual interest rate he was paying as figured by the investigator. There were wide differences between these figures, especially among the higher rate loans. Eighty-two (28 per cent) of the loans had interest rates in excess of 9 per cent per annum. For just ten of these eighty-two loans did the borrower know that he was paying a rate in excess of 9 per cent. Only in rare cases did borrowers realize the adverse effects on interest rates of interest discounting procedures and installment repayment plans without accompanying adjustments in interest charges. For fifty-two of the 296

loans, the borrowers said that they did not even know how much interest they were paying. The average interest rate for these loans was 15.9 per cent.[11]

The interest rate a farmer paid was related to his knowledge score. Those borrowers who scored five points or less on the knowledge scale thought they were paying an average of 5.9 per cent on their loans but were actually paying 8.0 per cent. Those borrowers who scored sixteen or better thought they were paying an average of 5.2 per cent on their loans and were actually paying an average of 5.5 per cent. High knowledge farmers paid less interest than low knowledge farmers. Similar to the farmers with high knowledge scores, the farmers with high deliberation scores had more realistic opinions of the interest rates which they were paying. Farmers who were scaled as highly deliberative paid lower interest charges than farmers who were scaled as making little or no deliberation about credit.

Not only did farmers not have knowledge of the actual interest charges they were paying, but they did not believe that such knowledge was important. Farmers made very few efforts to improve their understanding of interest rates. For 218 of the outstanding loans, farmers said that they did not know of any source which lent at a lower rate of

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[11]The reason for this high rate was that most of these loans for which borrowers did not know the interest rates were of the dealer installment type. This is usually a very high interest type of credit and one in which the interest charges are easily hidden. Had the losses from cash discounts been figured into these rates, they would have been higher still.

interest than the one which they patronized. These borrowers thought they were paying an average interest rate of 5.76 per cent. Actually, they were paying an average rate of 9.68 per cent.

The problem of farmers' understanding of interest rate calculation is interconnected with their lack of knowledge of their other alternatives. It is unlikely that a farmer will make much effort to inform himself of his alternative sources until he understands the actual rate he pays at his present source. The reason that 74 per cent of the farmers did not know of any lower rate sources when these same farmers paid an average interest rate in excess of 9 per cent was that (1) they did not realize how high an interest rate they were actually paying, and (2) they were not acquainted with the existence of or the amount of interest charged by alternative sources.

CHAPTER VI

FARMERS' PREFERENCES OF LOAN PRACTICES AND SOURCES

Introduction to Chapter VI

A preference is an attitude, and thus an evaluation pro or con. As was mentioned in Chapter II, besides this characteristic, attitudes also have the characteristic of strength. An attitude may evaluate a phenomenon in a certain direction, but if this attitude has little strength, that is, if it is not to any degree dominant and central in the decision at hand, then this attitude is of little importance. Its predisposition for and influence on action is negligible.

It is not enough to know the object value of an attitude. One must also know how important that attitude is to a person, and to what extent it influences his action. In the attempt to determine the characteristics of loans and loan sources to which farmers have favorable and unfavorable attitudes, this factor of attitude strength was considered.

Two different questioning techniques were utilized. To measure strength, the technique was to ask farmers what factors they particularly liked about the credit sources with which they were dealing. Farmers were also asked to name the sources to which they would apply in the event they wanted short or long-term loans, and were then asked why they would apply to those sources rather than others. It was believed that by getting farmers to volunteer such reasons and preferences they would mention the characteristics uppermost in their minds, i.e., it was hoped that they would mention those beliefs which to them had the most strength.

The second questioning technique was directed at determining the farmers' object value toward certain preconceived (by the investigator) characteristics. This was done by direct questions on past loans. Of course the open ended questions determined the object value as well as the strength, but certain loan characteristics were originally hypothesized to be of prime importance.

By combining the results of these questions it was hoped to arrive at a cross-measure on the open responses of farmers' loan preferences.

Farmers' Short-Term Source Preferences

When asked where they would go for a short-term loan supposing that they wanted one, 358 of the farmers said that they would go to the bank (see Table XXV). Ninety-eight of these farmers offered as a reason the fact that they were better acquainted with banks than they were with other loan sources. This reason seemed particularly, if not peculiarly, restricted to banks because from the ninety-six farmers who said they would patronize other short-term loan sources, it was mentioned only nine times. Most farmers gave more than one reason for their source preferences.

It would appear that those who would patronize banks would do so because of an already established acquaintanceship with the banker rather than for other reasons. This contention is further supported by the fact that only 16 per cent of the reasons why farmers would patronize banks referred to the desirability of the loan terms while for the

TABLE XXV

RESPONSES AND FREQUENCY OF REASONS GIVEN FOR THE QUESTION: "IF YOU DESIRED A $500 LOAN OF ONE YEAR OR LESS FOR YOUR FARM OPERATION, TO WHAT CREDIT SOURCE WOULD YOU APPLY?"

Source to which farmers said they would apply		Reasons given by farmers										
		Personal relationships		Loan terms		Convenience and red tape		Satis. past service		Only alter-native		Total reasons offered
Source	Frequency mentioned	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.
P.C.A.	27	15	29	21	41	6	12	3	6	6	12	51
F.L.B.	2	2	50	2	50	0	0	0	0	0	0	4
Bank	358	231	34	113	16	115	17	75	11	151	22	685
Pvt. Indiv.	52	8	10	35	44	7	9	8	10	21	27	79
Relative	6	1	17	3	50	1	16	0	0	1	17	6
Merch. Install.	2	1	33	1	34	1	33	0	0	0	0	3
F.H.A.	5	4	44	5	56	0	0	0	0	0	0	9
Other	2	1	25	1	25	1	25	0	0	1	25	4
Sub-total	454	263	31	181	22	131	16	86	10	180	21	841
Don't know	42											
Would never do it	4											
Total	500											

Production Credit Associations and Private Individuals, the banks main competitors in the short-term farm credit field, 41 and 44 per cent respectively referred to the loan terms. Those farmers who mentioned banks also seemed to value convenience and less "red tape" more than did the others.

Knowledge seemed to play little part in the farmers' value of acquaintanceship with their creditors or in their preference of banks over other sources. Ninety-seven farmers (27 per cent) offered as the reason for their bank preference the statement that it was either the only loan source at which they thought they could get a loan or the only source they knew about. Similarly, 22 per cent of those who said they would go to the Production Credit Association and 27 per cent of those who would go to a private individual, gave these answers as their reasons.

Production Credit Association borrowers seemed to value low interest rates as 63 per cent of those who preferred P.C.A. mentioned low interest. The friendliness of the agency personnel also counted highly with the farmers who preferred P.C.A. Thirty per cent of them mentioned friendliness while only 12 per cent of the bank borrowers mentioned it, and of those who preferred borrowing from a private individual, just 2 per cent mentioned friendliness.

The appeal of the Private Individuals as a source of credit was low interest and dependability of renewal through their not pushing for repayment. Twenty-one per cent of those who preferred this source mentioned this latter reason. For both the bank and the P.C.A., this

reason was given about 4 per cent of the time or less than one-fifth as frequently.

Farmers' Long-Term Source Preferences

When asked about their probable actions in long-term borrowing, some different types of responses appeared (see Table XXVI). Of the 500 farmers asked the question of where they would go for a long-term loan, 182 of them stated that they did not know. They explained either that they did not know of anyone who extended long-term credit or that they had never thought about it and would have to check around. Thirty-five farmers (over and above this 182) stated that they would never take such a loan under any conditions. In most cases, fear of inflexible payments was the reason given. These answers were discussed briefly in Chapter V.

Of the 282 farmers mentioning a long-term credit source, 128 gave the National Farm Loan Association as the source to which they would prefer to apply. Seventy per cent of these farmers gave as their reason a low interest rate. Only one mentioned personal acquaintance as a reason, while twenty-six or 32 per cent of those who said they would patronize the bank mentioned personal acquaintance. Thus, the major differences in the reasons why farmers said they would patronize the N.F.L.A. or the bank for long-term credit were the same as the reasons why they would patronize the P.C.A. or the bank for short-term credit, only more extreme.

For long-term credit, farmers seemed to place a greater value on low interest than they did for short-term credit, as one would expect.

TABLE XXVI

RESPONSES AND FREQUENCY OF REASONS GIVEN FOR THE QUESTION: "IF YOU DESIRED A LONG-TERM REAL ESTATE MORTGAGE LOAN TO EXPAND YOUR FARMING BUSINESS, TO WHAT CREDIT SOURCE WOULD YOU APPLY?"

Source to which farmers said they would apply		Reasons given by farmers										
		Personal relationships		Loan terms		Convenience and red tape		Satis. past service		Only alternative		Total reasons offered
Source	Frequency mentioned	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.
P.C.A.	7	2	15	9	69	0	0	1	8	1	8	13
N.F.L.A.	128	35	15	187	77	3	1	5	2	12	5	242
Bank	81	54	40	22	17	11	8	3	1	45	34	134
Insurance co.	7	2	20	7	70	0	0	0	0	1	10	10
Finance co.	2	1	25	2	50	0	0	0	0	1	25	4
Pvt. indiv.	23	8	23	15	43	3	8	2	6	7	20	35
Relative	1	0	0	0	0	0	0	0	0	1	100	1
F.H.A.	23	3	7	34	79	0	0	1	2	5	12	43
Other	10	1	6	10	67	0	0	0	0	4	27	15
	282	106	21	286	58	17	3	19	2	77	16	497
Don't know	182											
Would never do it	35											
Total	500											

Of all the farmers who gave a short-term credit source, just 21 per cent mentioned the interest rate as important; while for long-term sources, 47 per cent mentioned the interest rate. Also for long-term sources, 58 per cent of all the reasons given referred to the loan terms while only 22 per cent of the reasons for short-term sources referred to the loan terms. Convenience and less "red tape" were discounted by farmers in the selection of a long-term source; apparently because the amounts involved were large and transactions were infrequent. Convenience and "red tape" were mentioned only seventeen times by the 282 farmers who mentioned a long-term source and 131 times by the 454 farmers who mentioned a short-term credit source. Still, as in the case for short-term credit, when given as a reason, it was usually applied to banks.

It would appear that for short-term loans, farmers consider small differences in interest rate negligible. For longer term loans, the interest rate becomes a more serious factor. This same consideration spread through other aspects of loan agencies. If a short-term source offered convenience and friendliness, it was enough. A long term source, however, must offer the farmer desirable loan terms.

The above relationships existed even though interest charges in some cases varied as much as 15 per cent for comparable short-term loans. It would appear that under present conditions in this area, Production Credit Associations and other short-term low cost lenders are not likely to be a very potent factor in providing leadership in improving the terms and charges on short maturities. However, if through credit education farmers can be made more familiar with and alert to the costs of short-

term credit, these conditions need not necessarily be present. Apparently, the lack of credit knowledge of farmers is a seriously limiting factor to the improvement of the short term loan market. Further support for this conclusion is provided by the fact (referred to above) that those farmers who did use low cost lenders such as the P.C.A. said that they did so because of low interest. Such relationships suggest reasons why P.C.A.'s and other low cost short-term lenders should be more interested in credit education than either the high cost short-term lenders or any of the long-term lenders.

Borrowers' Attitudes Toward Specific Loan Practices and Sources

When farmers were asked what they liked and disliked about the credit sources with which they were dealing, the results were similar to the results related in the previous section on hypothetical borrowing practices. The purpose of these questions was to determine what attitudes were dominant in the borrowers' conception of loan practices. Table XXVII is a summary of the most frequently mentioned characteristics.

Farmers were also asked direct questions about various borrowing practices. This was to determine the object value of attitudes the investigator had thought to be particularly important. The results of these questions, listed by the number and percentage of farmers who had the mentioned attitude with a negative (unfavorable) object value, are listed in Table XXVIII. These questions were asked for the 318 loans the farmers had repaid within the preceding three years. As there were not a sufficient number of loans with the National Farm Loan Associations

insurance companies, relatives, or the Farmers Home Administration to reflect any significant results, these sources were excluded from Table XXVIII. The table shows that farmers found very few faults with the credit agencies with which they dealt. This would be expected, for if they had serious objections to a particular policy of a source, it is unlikely that they would deal with that source. The only exception to this was the interest rate.

The object values and strengths of attitudes toward various credit sources and practices are discussed individually below.

"Red Tape" and Convenience

"Red tape" normally includes both a time and a trouble factor. For 12 per cent of the outstanding loans, little "red tape" was mentioned as a factor the borrower liked. Convenient location was mentioned on 18 per cent, and quickness of the loan procedure was mentioned on 9 per cent. For less than 2 per cent of the outstanding loans was too much "red tape" mentioned as a factor the borrower disliked. Inconvenience and slowness were mentioned for less than 1 per cent of the loans.

A possible reason for these answers is that red tape was particularly important to a borrower, and they did not patronize those sources at which they have previously experienced or heard that there was considerable red tape. Also, at many sources there is very little procedure for all loans after the first one. It appears that there may be a popular misconception among farmers as well as others that arranging a loan involves considerable more red tape than it actually does. And when they do borrow, they find considerably less red tape than they expected and

TABLE XXVII

NUMBER AND PER CENT OF FARMER-BORROWERS OFFERING VARIOUS CHARACTERISTICS THEY LIKED ABOUT THE CREDIT SOURCES WITH WHICH THEY WERE DEALING

Source	Number of loans	Friendly		Low interest		Won't push you, will renew		Long terms		Repay anytime		No red tape		Convenient location		Quick		They didn't turn me down		Nothing especially		Other		Total reasons offered
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	
P.C.A.	14	7	50	6	43	4	29	0	-	1	7	3	21	2	14	1	7	0	0	1	7	5	36	30
N.F.L.A.	20	10	50	13	65	10	50	14	70	4	20	1	5	0	0	0	0	1	5	0	0	6	30	59
Comm. Bank	105	24	23	18	17	20	19	5	5	3	3	13	12	19	18	17	16	27	26	2	2	39	37	187
Comm. Bank-Dealer Arranged	20	3	15	3	15	4	20	0	0	1	5	1	5	1	5	1	5	4	20	2	10	4	20	24
Insurance Company	4	2	50	3	75	2	50	2	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Private Individual	41	9	22	7	17	8	20	1	2	3	7	4	10	7	17	3	7	12	29	3	7	5	12	62
Private Individual-Relative	10	0	0	3	30	0	0	1	10	0	0	1	10	0	0	0	0	0	0	2	20	0	0	7
Dealer In-stallment	68	7	10	12	18	3	4	7	10	2	3	11	16	22	32	4	6	3	4	8	12	24	35	103
F.H.A.	9	1	11	4	44	1	11	2	22	0	0	1	11	0	0	1	11	0	0	1	11	2	22	13
Other	5	0	0	4	80	0	0	1	20	0	0	0	0	3	60	1	20	0	0	0	0	0	0	9
Total	296	63	21	73	25	52	18	33	11	14	5	35	12	54	18	28	9	47	16	19	6	85	29	503

TABLE XXVIII

NUMBER AND PER CENT OF FARMER-BORROWERS INDICATING UNDESIRABLE CHARACTERISTICS ABOUT THEIR PAST LOANS IN RESPONSE TO DIRECT QUESTIONS[a]

Source	Number of loans	Too much red tape		Unfriendly personnel		Interest too high		Repayment period not long enough		Too much supervision		Don't understand farmer problems		Want too much personal information		Would not return for another loan	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
P.C.A.	14	1	7.1	0	0	1	7.1	0	0	0	0	0	-	2	14.3	0	0
Comm. Bank	135	11	8.1	5	3.7	32	23.7	12	8.9	4	3.0	2	1.5	8	5.9	3	2.2
Comm. Bank -dealer arranged	18	4	22.2	1	5.6	9	50.0	0	0	0	0	b	b	0	0	2	11.1
Pvt. individual	32	0	0	1	3.1	10	31.3	9	28.1	0	0	1	3.1	1	3.1	3	9.4
Dealer installment	101	14	13.9	0	0	45	44.6	8	7.9	4	4.0	b	b	11	10.9	9	8.9
Other	18	11	61.1	0	0	2	11.1	0	0	1	5.6	1	5.6	4	22.2	1	5.6
Total	300	41	13.7	7	2.3	99	33.0	29	9.7	9	3.0	5	1.7	26	8.7	18	6.0

[a]See Appendix B, past loan questionnaire, questions 5, 7-11, 13, 16.

[b]Question was not asked for dealer installment loans or dealer arranged bank loans.

appreciate it. The outstanding loan source for which the greatest percentage of the borrowers voluntarily mentioned little "red tape" was the P.C.A. It was, nevertheless, only the fourth most important factor mentioned by P.C.A. borrowers.

Convenience of location was mentioned frequently, the largest group mentioning it being the users of dealer installment credit. These borrowers were the only ones who mentioned convenience more times than any other characteristic. As for no "red tape" and quickness, all borrowing groups mentioned at least one other characteristic more frequently.

Convenience and "red tape" appeared to be important factors, but not the most important factors in loan decision making. This is fortunate for in cases when "red tape" and convenience were mentioned, they did not appear to contribute to the farmers' economic betterment. Of the thirty-five loans for which no "red tape" was mentioned as a desirable characteristic, twenty-seven had interest rates in excess of 9 per cent. Twenty-nine of the fifty-four loans mentioned for convenience had rates at least this high, and thirteen of the twenty-eight loans preferred for their quickness had interest rates 9 per cent or above.

Friendliness

Friendliness was mentioned for 21 per cent of the loans. Only six farmers when asked directly stated that they thought the agency personnel were not friendly. Three mentioned unfriendliness as a factor which they disliked about their loans.

It is not difficult for lenders to furnish a friendly environment, and it appears that most of them did. However, the scarcity which the

borrowers replied that the lender was not friendly may indicate that borrowers will not patronize sources at which they do not receive friendly treatment.

Friendliness was volunteered more times as a favorable factor than any other factor at the P.C.A. and insurance companies. On the direct question, five of the six statements that the personnel were unfriendly were applied to banks. This, however, was still less than 4 per cent of the bank loans.

Interest Rate

Low interest was the most frequently mentioned favorable characteristic. It was mentioned as a desirable characteristic for 25 per cent of the outstanding loans. High interest was also the most frequently mentioned unfavorable characteristic. It was mentioned as being an undesirable characteristic for 11.5 per cent of the outstanding loans which was almost three times the frequency any other undesirable factor was mentioned.

On the direct question for past loans (did they think the interest rate was too high?), 31 per cent gave a "yes" answer. This also was almost three times the amount any other factor was answered as being unfavorable under specific questioning.

Interest was, by frequency of mention, the single most important loan characteristic. However, the fact that it was mentioned as being undesirable almost as many times as it was mentioned as desirable appears to indicate that farmers cannot or do not think that they can do anything about the interest rate. The main inference to be gained from the preceding

chapter was that farmers have very little knowledge of their credit alternatives, the calculation of interest rates, or of what a true annual interest rate actually is. It appears that although farmers disclaimed high interest rates, the strength of this attitude was not sufficient for them to seek better knowledge of lower interest rate sources.

Twenty-two per cent of the outstanding dealer installment loans, the borrowers said, had the undesirable character of high interest. Forty-five per cent were rated as too high under direct questioning. Low interest was mentioned on 18 per cent of the installment loans as a desirable characteristic. This was second only to convenience of location as a desirable characteristic of dealer credit.

Low interest was volunteered as the most desirable characteristic of the following sources: N.F.L.A., insurance company, relative lender, and F.H.A.

Under direct questioning about high interest charges, they were mentioned most for dealer installment and dealer arranged bank loans and least for P.C.A. loans. Farmers did believe that they were paying too much interest for dealer and dealer arranged credit, even though many did not know how much that interest was. But this belief was not strong enough for many of them to go to the trouble of changing sources or of looking around for a better one. To a certain degree interest was mentioned as too high at those sources at which the interest actually was quite high. There was an associated tendency, however, to conceive of interest in amounts instead of rates and to complain of interest on the larger sized loans.

Length of Repayment Period and Renewal Policy

It appeared that more important than the length of repayment period offered by the lender was the lender's renewal policy. It did not seem to matter to a farmer how long he had to repay a loan, if he was certain that if he could not repay it, it would be renewed. And in most cases farmers thought the lender would renew. For the 296 loans outstanding, 229 said they believed their loan could be renewed, fifty said they were not sure if the loan could be renewed or not, and just seventeen said they did not believe that their loan could be renewed.

As would be expected, long terms were mentioned very frequently for the long-term credit sources: The National Farm Loan Associations and insurance companies. These two sources were also mentioned by half their borrowers as being desirable because they would not push for payments. This factor was mentioned for just one of the nine Farmers Home Administration loans.

On the direct question for past loans, length of repayment period was stated as not being long enough on just 9 per cent of all loans, 34 per cent of the loans with private individuals, and 9 per cent of the bank loans. It was not stated as being too short for any of the P.C.A. or bank-dealer arranged loans.

Loan Supervision

Little loan supervision was voluntarily mentioned as being desirable on just slightly more than 2 per cent of the outstanding loans and was never voluntarily mentioned as being too much or undesirable even for the F.H.A., which promotes a supervised loan. Supervision was mentioned as

being too great on just ten of the 318 past loans. On this direct questioning on past loans, there were just three F.H.A. past loans for which one was said to have had too much supervision. It was stated as being too much for 3 per cent of the bank loans and no borrower stated that there was too much supervision from P.C.A., N.F.L.A., bank-dealer arranged, private individual, or relative lender.

Supervision by the lender did not seem to be extensive and when present did not seem to be objected to by the farmers. In fact, in a few cases farmers mentioned that they would like to have even more supervision. But in most cases farmers seemed content to be let alone.

Lender Understanding of Farmers' Problems

For just 5 per cent past loans did farmers say that they did not think the lender had a good understanding of farm problems. It was mentioned most for banks and then just twice for 135 loans. The question was not asked on dealer and dealer arranged bank loans.

Farmers thought lenders had a fairly good understanding of their problems. They not only thought it but expected them to have a good understanding, because they mentioned it just three times as being a factor they liked about their source. And then they mentioned it in the form that the lender was more interested in farmers. It was never voluntarily mentioned as being an undesirable aspect of a credit source.

Personal Information Required

Farmers did not seem to feel that they had to answer too many questions about their personal affairs when applying for loans. For just two loans did the borrowers state that the fewness of the questions

was a factor which they liked about the source. It was never mentioned as a factor which they disliked, and in response to a direct question, just two farmers stated that the lender wanted too much personal information.

Confidentialness

Farmers also did not feel that there was insufficient privacy when they talked over their loan terms. The fact that all the lenders' business was confidential was mentioned just twice as being desirable and its opposite was never mentioned as being undesirable. Farmers also did not feel that there was insufficient privacy when they talked over their loan terms.

Volume of Credit Extended

On the whole, farmers said that lenders would lend them as much money as they wanted. On the direct questioning on past loans, external credit rationing was mentioned for 10 per cent of the bank loans and never more than once for any other source. It was volunteered as an undesirable characteristic on 4 per cent of the outstanding bank loans and was never mentioned as a desirable characteristic of a bank loan. From evidence cited in previous chapters, it appears that only a few farmers were in a position to judge the adequacy of their loan volume, however. The past loans did not include National Farm Loan Association loans because of the small number of them which had been reapid within the preceding three years. Of the twenty N.F.L.A. loans outstanding, five of them were mentioned as being undesirable because of their limited amount. On five other loans the holder said he had checked with the N.F.L.A. first, but for one reason or another, they would not lend him enough money.

More Negroes than whites mentioned credit unavailability.

Flexibility of Terms

Farmers appeared to value the privilege of repaying a loan whenever they wanted and not suffering interest penalties, especially for long-term loans.

It was mentioned for 20 per cent of the N.F.L.A. loans and 7 per cent of the P.C.A. loans, both of which allow the practice. It was also mentioned for 7 per cent of the loans with private individuals who usually also allow repayment anytime.

No optional repayment was mentioned as an undesirable factor for three of the four past insurance company loans. Insurance companies do not allow optional repayment without penalty.

Other Characteristics

For only small percentages of the loans did the holders mention as factors which they liked the fact that an agency was home business (2 per cent), honest and reliable (3 per cent), and that they didn't require a cosigner (1 per cent). Appendix A, Table V lists all the preferences which farmers had about their loans. It was previously believed that these factors were of greater significance than this. For cosigning, the reverse seemed to be the case and getting a cosigner was mentioned as desirable because of its convenience more than it was mentioned as being undesirable.

General Acceptability

Farmers were fairly well satisfied with their loan sources. For just eighteen of the 316 past loans did the holder state that he would

not return again for another loan if he wanted one. Eleven of these were dealer or dealer arranged bank installment loans. All of the P.C.A., N.F.L.A. and relative borrowers said they would return to those sources again in the event they should want other loans.

CHAPTER VII

SUMMARY AND CONCLUSIONS

Summary of Procedures

The results of this study were based on a proportional stratified random sample of 500 Tennessee farmers. These farmers were taken from randomly selected square mile blocks in twelve representative Tennessee counties.

Two hundred and sixteen farmers had loans outstanding at the time of interview and 288 farmers had loans outstanding and/or had repaid loans within the preceding three-year period (1954-56). Data were collected on 296 outstanding loans and 318 past loans. More than one loan at a particular credit source was counted as just one loan.

Five point indices based on interviewer appraisals were made for attitudes about credit and deliberation about credit. A twenty-one point knowledge scale was constructed to measure farmers' awareness of loan source alternatives and terms. These measures and their associated environmental characteristics were incorporated into correlation and regression analyses, and their comparative associations with each other and/or the amounts farmers borrowed were measured. In other parts of the study simple tabular analyses were used.

Validity of the Hypotheses

The purpose of the study was formulated in the form of five hypotheses stated in Chapter I. The validity of these hypotheses will be discussed here in the same order as their earlier presentation in Chapter I.

Hypothesis I

Hypothesis I was verified to a certain degree. Attitudes, deliberation, and knowledge and their associated environmental factors accounted for 34 per cent of the variability in the amounts farmers borrowed. When the analysis was restricted to just the farmers who borrowed, they explained 38 per cent of the variability.

When attitudes, deliberation, and knowledge were extracted from the analysis and treated as separate dependent variables, the remaining factors were associated with 39 per cent of the attitude index, 51 per cent of the deliberation index, and 54 per cent of the knowledge score. It was hypothesized that the large amounts of unexplained variation left by these multiple coefficients of determination were probably due to factors not included within the scope of the study (e.g., inheritance and credit needs of farmers, institutional lending policies, etc.), and also to inadequacies in the techniques used to measure the variability in the factors. In spite of these scope limitations and technical inadequacies, all of the multiple and many of the partial correlation results came out highly significant.

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There was considerable joint association between the independent variables, and often the indirect associations of a variable were greater

than its direct association. The most important determinants of the amount borrowed were the direct and indirect effects of knowledge, attitudes, and sales. Deliberation had a high gross association but only a small partial correlation with the amount borrowed, most of its effect being exerted indirectly through knowledge. Age, tenure status, and state area also had some association: With other factors constant, younger farmers borrowed more than older farmers, owners borrowed more than sharecroppers, and West Tennessee farmers borrowed more than East Tennessee farmers. Although education was grossly correlated with the amount borrowed, its partial correlation was negative, indicating that the better educated farmers borrowed less money when the other factors were held constant. The reason for this was probably a greater amount of inheritance and wealth on the part of the better educated farmers. The per cent of farmers' incomes received from crops or the per cent of their incomes received from off-farm sources had little association with the amounts which farmers borrowed or with their attitudes, deliberation, or knowledge about credit.

Hypothesis II

There did appear to be some stigma attached to the use of credit, but not as much as hypothesized. Twenty per cent of the farmers thought that borrowers were at least sometimes looked down upon by their neighbors, and 39 per cent thought that non-borrowers were better farm managers than borrowers (as compared to 23 per cent who thought that borrowers were better). These differences in beliefs, however, probably reflected in part differences in farmers' need for credit.

The farm credit cooperatives have probably done much through their membership meetings in demonstrating positive attitudes toward credit. The continuation of this practice and increased contact and sponsorship by lenders of farm and community groups should eventually break down negative stigma attitudes toward borrowing money.

There was a carry-over of traditional credit beliefs. Many beliefs appeared oriented toward a non-existent situation from an earlier era. Many farmers (and not necessarily just the older farmers) did not accept the new economic environment where large amounts of capital are needed to farm. They were attempting to operate small under-capitalized farms as their fathers had before them and seemed not to understand why their farms were not profitable. There even existed a paranoiac belief among some farmers that "somebody is out to get the little farmer". If credit and other economic attitudes would be formed with a more realistic awareness of the existing economic environment, these farmers would understand the economic forces acting on them and operate more profitable and progressive farms.

Negative attitudes appeared to be more common in East than in West Tennessee. Larger percentages of East Tennessee farmers expressed negative object values to the attitude questions than did West Tennessee farmers. Also, the correlation results indicated that East Tennessee farmers had less knowledge of and less favorable attitudes toward credit than West Tennessee farmers, but they deliberated more about it. It is probable that traditional credit attitudes of East Tennessee farmers are in conflict with their existing environment, and that the high amount of

deliberation is a result of as well as an attempt to reconcile this conflict. Such a conflict accompanied by low credit knowledge indicates that East Tennessee may be a fertile ground for credit education programs.

The risk factor appeared important, especially as it applied to the giving of mortgages. Twenty-five per cent of the farmers said they did not think it justifiable to give a mortgage on livestock or crops, and 40 per cent thought it not justifiable to give one on real estate. This attitude on mortgages existed even though many farmers realized that giving a mortgage did not increase their legal obligation to the lender. Credit agencies should be aware of the attitude of farmers toward mortgages. In making loans they should only require mortgages when they consider it necessary for their protection, and when a mortgage is required, they should carefully explain to the farmer what a mortgage actually involves and why they require it.

Hypothesis III

Farmers' knowledge of the farm credit sources available to them and of the practices of these sources was, as hypothesized, very limited. When farmers were asked where they would go for short and long-term loans, if they wanted them; 8 per cent of the farmers said they did not know where they would go for a short-term loan, and 36 per cent did not know where they would go for a long-term loan. Most of these farmers said or intimated that they did not know of any source at which they could get the type of loan in question. In addition to these farmers, 40 per cent of the farmers who did give a short-term source and 27 per cent of those who mentioned a long-term source, gave as a reason for their selection

the belief that for one reason or another it was their only loan source alternative.

Such answers would not necessarily be indicative of a lack of knowledge of alternatives, if there existed evidence of serious external capital rationing caused by conservative institutional lending policies. Also, the knowledge scores achieved by the farmers who gave the above answers were on the average one to three points lower than the average score achieved by all farmers.

Many farmers did not even appear to have ipso facto knowledge of the existence of some of the less well known farm credit agencies, i.e., the Farmers Home Administration and the farm credit cooperatives. There appeared to be little desire on the part of farmers to improve their knowledge, because for just thirty of the 296 outstanding loans did borrowers say that they had "seriously considered" any other source for their loans.

Although external capital rationing did not exist to a significant degree, internal rationing created by limited knowledge of alternatives did exist. Farmers also had a tendency to have least knowledge of the lower interest rate sources of credit. If farmers had better knowledge of these lower cost alternatives and used them, profits could be increased both through the lower cost of their present volume of credit and also through the increased expansion potential created by the lower marginal cost of capital.

Hypothesis IV

Contrary to what was hypothesized, many farmers did appear to have some understanding of the varying purposes and the productive aspects of

credit. They recognized that credit had a profit making characteristic; but they, nevertheless, conceived of credit not as a productive tool to expand the farm operation, but as a tool for emergencies and bad years to maintain the status quo of the operation. The same basic theoretical relationships are involved in the latter as in the former, but their attitudes oriented knowledge in just one direction: that of farm maintenance rather than expansion, i.e., the survival of the going concern in abnormal times rather than in the long run. The risk factor was probably the reason for this attitude orientation. Most farmers seemed to feel that they should do the best possible job of farming with their existing facilities rather than to risk these facilities in an attempt to expand them.

Education appeared needed not only on the attitude toward the productivity of credit, but also on credit terms. For fifty-two loans, the borrower stated that he did not know how much interest he was paying. As figured by the investigator, the average true annual rate of interest on these loans was 15.9 per cent. Eighty loans out of a total of 296 loans outstanding had interest rates in excess of 9 percent, but for only ten of them did the borrower realize that he was paying this high an interest rate. Education on interest rates should emphasize the effects of interest discounting procedures, service charges, installment repayment plans, and cash discounts. Many farmers did not recognize the effects of these practices on their true rate. Farmers should be educated on how to calculate interest rates and also to the need to calculate the interest themselves before taking a loan. For just forty-two of the 296 outstanding

loans did the borrower say that he had ever figured the interest rate on that loan. A lack of knowledge of the interest rates which they paid subjected farmers to high interest rates and also furnished no incentive to investigate other sources which may have had a lower interest rate as well as other more desirable features.

Hypothesis V

The major characteristics borrowers said they liked about their loans in order of frequency of mention were: Low interest, friendliness, renewal policy, convenient location, no red tape, long terms, quickness, and optional repayment. The characteristics about their past loans which borrowers mentioned as being undesirable under direct questioning were in order of frequency of mention: High interest rate, too much red tape, too short repayment period, and the requirement of too much personal information. The only factor which a significant number of farmers volunteered as being undesirable on outstanding loans was high interest which was mentioned three times as frequently as any other factor. Few farmers mentioned such factors as loan supervision, co-signing practices, lender understanding of farmer's problems, confidentialness, reliability and honesty of the lender, or that a farmer should patronize home businesses.

In their selection of short-term credit sources, farmers valued personal relationships with the lender more than they did loan terms. For long-term credit, however, they put a greater value on credit terms. Just 22 per cent of the farmers mentioned loan terms as a factor which would influence their decision in regard to where they would apply for a

short-term loan, while 58 per cent mentioned it in regard to a long-term loan. Such a circumstance points up a possible greater need for credit education in the short-term field, as farmers were susceptible to high interest charges from short-term lenders more so than they were from long-term lenders. Farmers should be educated to the fact that yearly short-term loans can be as great or greater an interest burden than one long-term loan.

Although farmers deplored high interest charges, they still patronized high interest rate sources, and they made little attempt to deliberate or improve their knowledge about low cost sources. If it were not for the low level of deliberation about sources, one might expect that if farmers were just furnished information on their lower cost alternatives, they would make immediate use of such information and patronize the low interest rate sources. But the low amount of deliberation and investigation which farmers made about alternative sources implies the lack of any attitudinal conflict, and may mean that at least for short-term loans, farmers either were not as dissatisfied with their interest rates as they claimed to be, or else they thought they were already getting the lowest interest rates possible. The most probable explanation for this is noted above under Hypothesis IV: Many farmers did not have knowledge of the high interest rates they were actually paying or of the interest rates at alternative sources. Thus, the motive to deliberate and investigate interest rates and loan sources was missing, and deliberation and investigation did not take place. If a credit program is to be of significance, it must implant this motivation.

Theoretics of Credit Education

Credit decisions and actions are initiated by conflicts among beliefs. A poor crop year or a dissatisfaction with his present level of operation and income may cause a farmer to reevaluate his management practices. If his attitudes toward credit use are unfavorable and strong, he will either never even consider the use of credit, or else he will consider it but he will reject it. In either case, he probably will attempt to rationalize his beliefs through deliberation to the extent that they achieve equilibrium, probably by substantiating an existing belief that he is already doing all that he can do.

If this rationalization through deliberation is inadequate, or if his attitudes toward credit are less strongly negative, or if through this deliberation process new opinions and knowledge are gained which make his attitudes toward credit more favorable, then he may initiate a judgment which will manifest action.

Any educational program directed at changing farmers actions in the credit market must eventually change his attitudes and judgments about credit. However, it is impossible to change attitudes and judgments without also changing the jointly associated opinions, but because opinions do not involve a personal evaluation, they are more subject to change than are attitudes. It is also possible to furnish a farmer new opinions of knowledge which are pure additions to knowledge and do not conflict with any existing beliefs.

Education should involve complementing existing beliefs. Education of attitudes and judgments directly involves a substitution and replacement

of existing attitudes and judgments. A credit education program for farmers should give them new credit opinions in order that they may form more penetrating attitudes on their own and, hence, more sagacious credit actions. Farmers need more information (opinions of knowledge) on the actual credit market situation. Such opinions as how interest charges are calculated and masked, varying types of loans available, legal information on mortgages, the role and importance of credit in modern economic society, etc., should induce him to reform existing attitudes about credit.

This is not to say that a discussion of attitudes about credit does not have a place in a farm credit education program. A discussion of attitudes does have a place in pointing up the need for credit knowledge, and in orienting farmers' deliberative processes along desired lines. Such a discussion should limit itself to those negative attitudes which do not appear to function for economic betterment. If these attitudes can be destroyed, new and more functional attitudes will take their place, and they will be a result of farmers' own deliberative processes and stronger as a result thereof.

Attitudinal conflict is desirable in an education program, because it is such conflict which causes deliberation. By getting farmers to deliberate about credit, the benefits of an education program can be multiplied through subsequent and continuing farmer deliberation and investigation of credit phenomena. But the conflict to spur deliberation should be created indirectly through showing the pragmatic results of alternative <u>actions</u> and through furnishing new opinions of

knowledge to supplement existing beliefs; and not through attempting to indoctrinate farmers with attitudes which are foreign to them. People often close their minds and reject that which directly conflicts with their existing attitudes. On the other hand, if farmers can be made to want to change their attitudes (by showing them the desirable results of actions which their existing attitudes would never eventuate) then the motivation to deliberate, investigate and learn about credit has been implanted, and an education program has been successful.

In view of the results of this study, any credit education program should include four major points.

(1) Knowledge showing the economic effects of various credit actions.

(2) Knowledge of the purposes, uses, and functions of credit; the sources, practices, and credit terms available to farmers; the calculation of interest rates; and the ease of credit acquirement.

(3) Logical analysis of existing disingenuous attitudes showing the effects of such attitudes when translated into action, their inconsistancies with knowledge, and why such attitudes are in existence.

(4) Information on individual credit situations and problems.

BIBLIOGRAPHY

BIBLIOGRAPHY

Blodgett, Ralph H. Principles of Economics. Third Edition. New York: Rinehart and Company, Inc., 1951.

Craven, Ruby. Family Business Matters. Circular No.144. Rockhill, South Carolina: South Carolina Extension Service, 1952.

Dewey, John. Intelligence in the Modern World. New York: Modern Library, 1939.

Edwards, Allen L. Statistical Analysis for Students in Psychology and Education. New York: Rinehart and Company, Inc., 1946.

Farm Ownership Loans. P. A. 62. Washington: U. S. Department of Agriculture Pamphlet.

(The) Federal Land Bank System, How it Operates. Circular No. 55. Washington: Government Printing Office, 1955.

Guthrie, Edwin R. and Powers, Francis F. Educational Psychology. New York: The Ronald Press Company, 1950.

Hawton, Hector. Philosophy for Pleasure. New York: Fawcett Publications, Inc., 1956.

Kallen, Horace M. "Pragmatism," Encyclopedia of the Social Sciences. New York: The MacMillan Company, 1933, 12:309.

Krech, D. and Crutchfield, R. Theory and Problems of Social Psychology. New York: McGraw-Hill Book Co., 1948.

Ruggiero, Guido De. "Positivism," Encyclopedia of the Social Sciences. New York: MacMillan Company, 10:206.

Russell, Bertrand. Human Knowledge: Its Scope and Limits. New York: Simon and Schuster, Inc., 1948.

Smith, James G. and Duncan, Atcheson J. Fundamentals of the Theory of Statistics. New York: McGraw-Hill Book Company, Inc., 1944.

Smith, M. Brewster, Bruner, Jerome S., and White, Robert S. Opinions and Personality. New York: John Wiley and Sons, Inc., 1956.

Thumbnail Sketch of the Farmers Home Administration. Washington: U. S. Department of Agriculture Pamphlet.

Twentieth Anniversary, The Production Credit System. Washington: Farm Credit Administration Pamphlet.

What You Want to Know About Your Production Credit Association. Washington: Farm Credit Administration Pamphlet.

CRANES CREST

APPENDIX A

TABLE I

THE KNOWLEDGE SCALE AND CORRECTNESS OF FARMERS' RESPONSES TO THE SCALE

No.	Question	Number of answers rated as Right	Don't know	Wrong
1.	Do private individuals, other than relatives, sometimes make loans to farmers?	426	62	12
2.	Can you give me the name of an individual who makes loans to farmers?	230	270	0
3.	Is it legal for a private individual to make a real estate mortgage loan to a farmer?	228	261	11
4.	Do insurance companies ever make farm loans?	201	270	29
5.	Can you give me the name of an insurance company which makes loans to farmers?	55	443	2
6.	Which type of loan would you more likely receive from an insurance company, a short-time production loan or a long-time mortgage loan?	132	350	18
7.	Do government regulations make all local banks charge the same interest rates?	150	278	72
8.	Do you think that making loans is a major part of a bank's business or just a sideline?	333	117	50
9.	What do the initials P.C.A. stand for?	51	445	4
10.	Where is the nearest office that you can obtain a loan from the Production Credit Association?	119	375	6

- Continued

TABLE I (CONTINUED)

THE KNOWLEDGE SCALE AND CORRECTNESS OF FARMERS' RESPONSES TO THE SCALE

No.	Question	Number of answers rated as Right	Don't know	Wrong
11.	What interest (only) rate does the Production Credit Association charge for loans?	49	439	12
12.	Where is the nearest office that you can obtain a loan from the National Farm Loan Association-Federal Land Bank?	150	326	24
13.	Does the National Farm Loan Association-Federal Land Bank charge the same interest rate to both large and small farmers?	117	377	6
14.	What interest rate does the National Farm Loan Association-Federal Land Bank charge for loans?	94	381	25
15.	Are the carrying charges on dealer installment credit (that is, buying something with a down payment and the rest on time) usually lower than the interest rate at a bank for a similar loan?	275	165	60
16.	Will a dealer sometimes give a discount for cash that he won't give if the sale is made on time?	429	48	23
17.	Will dealers sometimes give a discount for volume purchases?	387	93	20
18.	Is there in existence any government agency which makes loans to farmers who cannot get adequate credit elsewhere?	208	279	13

-Continued

TABLE I (CONTINUED)

THE KNOWLEDGE SCALE AND CORRECTNESS OF FARMERS' RESPONSES TO THE SCALE

No.	Question	Number of answers rated as Right	Don't know	Wrong
19.	What is the name of this agency?	57	439	4
20.	Where is the nearest loan office of the Farmers Home Administration (F.H.A.)?	80	413	7
	Total	3771	5831	398
	Average	189	291	20

TABLE II

DISTRIBUTION OF FARMERS ON THE "GENERAL ATTITUDE" AND DELIBERATION INDICES

"General Attitude" Index

Score	Class	Number of Farmers
4	Strongly in favor of credit	28
3	In favor of credit	220
2	Undecided about credit	160
1	Against credit	17
0	Strongly against credit	17

Deliberation Index

Score	Class	Number of Farmers
4	Very deliberative	142
3	Deliberative	160
2	Somewhat deliberative	90
1	Slightly deliberative	25
0	No deliberation	83

TABLE III

DISTRIBUTION OF KNOWLEDGE SCORES

Knowledge Score (Number Right)	Number of Farmers	Cumulative Total No.	Cumulative Total Per Cent
0	4	4	.8
1	14	18	3.6
2	27	45	9.0
3	24	69	13.8
4	53	122	24.4
5	58	180	36.0
6	39	219	43.8
7	53	272	54.4
8	45	317	63.4
9	43	360	72.0
10	32	392	78.4
11	29	421	84.2
12	19	440	88.0
13	15	455	91.0
14	9	464	92.8
15	14	478	95.6
16	10	488	97.6
17	4	492	98.4
18	4	496	99.2
19	2	498	99.6
20	2	500	100.0
Total	500		
Average	7.54		

TABLE IV

CORRECTNESS OF FARMERS' RESPONSES TO KNOWLEDGE SCALE QUESTIONS ON THE BASIS OF PATRONAGE OF THE REFERRED TO SOURCE WITHIN A PRECEDING 3 YEAR PERIOD

Source	Question	Percentage of farmers answering correctly who were: Patrons of referred to source	Non-patrons of referred to source	Non-patrons of referred to source but patrons elsewhere	Non-patrons anywhere
Private individual	Do private individuals, other than relatives, sometimes make loans to farmers?	88[a]	85	90	79
	Can you give me the name of an individual who makes loans to farmers?	68[a]	43	46	39
	Is it legal for a private individual to make a real estate mortgage loan to a farmer?	56[a]	44	47	41
Insurance	Do insurance companies ever make farm loans?	100	40	41	38
	Can you give me the name of an insurance company which makes loans to farmers?	75	10	9	11
	Which type of loan would you more likely receive from an insurance company, a short-time production loan or a long-time mortgage loan?	100	26	28	24

-Continued

TABLE IV (CONTINUED)

CORRECTNESS OF FARMERS' RESPONSES TO KNOWLEDGE SCALE QUESTIONS ON THE BASIS OF PATRONAGE OF THE REFERRED TO SOURCE WITHIN A PRECEDING 3 YEAR PERIOD

Source	Question	Percentage of farmers answering correctly who were: Patrons of referred to source	Non-patrons of referred to source	Non-patrons of referred to source but patrons elsewhere	Non-patrons anywhere
Bank	Do government regulations make all local banks charge the same interest rate?	31	29	28	26
	Do you think that making loans is a major part of a bank's business or just a sideline	82	59	64	57
Production Credit Association	What do the initials P.C.A. stand for?	55	8	10	6
	Where is the nearest office that you can obtain a loan from the Production Credit Association?	100	21	25	15
	What interest (only) rates does the Production Credit Association charge for loans?	95	6	7	6
National Farm Loan Association	Where is the nearest office that you can obtain a loan from the National Farm Loan Association-Federal Land Bank?	95	27	33	19

-Continued

TABLE IV (CONTINUED)

CORRECTNESS OF FARMERS' RESPONSES TO KNOWLEDGE SCALE QUESTIONS ON THE BASIS OF PATRONAGE OF THE REFERRED TO SOURCE WITHIN A PRECEDING 3 YEAR PERIOD

Source	Question	Percentage of farmers answering correctly who were: Patrons of referred to source	Non-patrons of referred to source	Non-patrons of referred to source but patrons elsewhere	Non-patrons anywhere
	Does the National Farm Loan Association-Federal Land Bank charge the same interest rate to both large and small farmers?	81	21	24	16
	What interest rate does the National Farm Loan Association-Federal Land Bank charge for loans?	95	15	20	10
Dealer Credit	Are the carrying charges on dealer installment credit (that is, buying something with a down payment and the rest on time) usually lower than the interest rate at a bank for a similar loan?	68	51	61	43
	Will a dealer sometimes give a discount for cash that he won't give if the same is made on time?	88	85	89	82
	Will dealers sometimes give a discount for volume purchases?	83	76	84	70

-Continued

TABLE IV (CONTINUED)

CORRECTNESS OF FARMERS' RESPONSES TO KNOWLEDGE SCALE QUESTIONS ON THE BASIS OF PATRONAGE OF THE REFERRED TO SOURCE WITHIN A PRECEDING 3 YEAR PERIOD

Source	Question	Percentage of farmers answering correctly who were: Patrons of referred to source	Non-patrons of referred to source	Non-patrons of referred to source but patrons elsewhere	Non-patrons anywhere
Farmers Home Administration	Is there in existence any government agency which makes loans to farmers who cannot get adequate credit elsewhere?	100	40	46	33
	What is the name of this agency?	90	10	13	5
	Where is the nearest loan office of the Farmers Home Administration (F.S.A.)?	90	15	18	10

[a]Includes relative loans.

TABLE V

NUMBERS AND PERCENTAGES OF FARMERS WHO MENTIONED VARIOUS CHARACTERISTICS AS BEING WHAT THEY LIKED IN A CREDIT SOURCE

	Mentioned as Being Desirable in a Proposed Short Term Loan[a]		Long Term Loan[b]		Mentioned for Present Loans as Being Desirable[c]		Undesirable[d]		Total Frequency Mentioned
Number loans	454		282		296		296		1328
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	
1. Personal Relationships	256	56.4	99	35.1	110	37.2	7	2.4	472
a. I know the lender	57	12.6	18	6.4	4	1.4	0	0	79
b. The lender knows me	48	10.6	16	5.7	4	1.4	0	0	68
c. They have the money to lend	46	10.1	17	6.0	4	1.4	1	0.3	68
d. Very friendly	52	11.5	17	6.0	63	21.3	3	1.0	135
e. Should patronize home business	16	3.5	7	2.5	7	2.4	0	0	30
f. Good credit rating	7	1.5	4	1.4	9	3.0	0	0	20
g. More interested in farmers	8	1.8	7	2.5	3	1.0	0	0	18
h. Honest,reliable and trustworthy	16	3.5	9	3.2	8	2.7	1	0.3	34
i. Obligated for past service	1	0.2	1	0.4	1	0.3	0	0	3
j. All business is confidential	5	1.1	0	0	0	0	2	0.7	7
k. Don't supervise you	0	0	3	1.1	7	2.4	0	0	10
2. Loan Terms	193	42.5	294	104.3	194	65.5	65	22.0	746
a. Low interest	94	20.7	133	47.2	73	24.7	34	11.5	334
b. Will renew if requested	39	8.6	20	7.1	55	18.6	5	1.7	119
c. Long terms	9	2.0	113	40.1	33	11.1	5	1.7	160
d. Don't have to mortgage	9	2.0	2	0.7	3	1.0	1	0.3	15
e. Don't demand much security	5	1.1	2	0.7	0	0	0	0	7
f. Short terms	4	0.9	0	0	1	0.3	0	0	5
g. Don't need a co-signer	6	1.3	1	0.4	3	1.0	2	0.7	12

-Continued

TABLE V (CONTINUED)

NUMBERS AND PERCENTAGES OF FARMERS WHO MENTIONED VARIOUS CHARACTERISTICS AS BEING WHAT THEY LIKED IN A CREDIT SOURCE

	Mentioned as Being Desirable in a Proposed Short Term Loan[a]		Long Term Loan[b]		Mentioned for Present Loans as Being Desirable[c]		Undesirable[d]		Total Frequency Mentioned
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	
h. Low payments	0	0	4	1.4	9	3.0	0	0	13
i. Can make my own terms	11	2.4	8	2.8	1	0.3	0	0	20
j. Will lend as much as I want	9	2.0	3	1.1	2	0.7	12	4.1	26
k. Can repay anytime	7	1.5	8	2.8	14	4.7	6	2.0	35
3. Convenience and Red Tape	131	28.9	17	6.0	119	40.2	9	3.1	276
a. Not much red tape	51	11.2	9	3.2	35	11.8	5	1.7	100
b. Convenient	42	9.3	3	1.1	54	18.2	2	0.7	101
c. Quick	34	7.5	4	1.4	28	9.5	2	0.7	68
d. Not a lot of questions	4	0.9	1	0.4	2	0.7	0	0	7
4. Satisfactory Past Experiences	86	18.9	19	6.7	7	2.4	0	0	112
a. Satisfactory service in past	25	5.5	11	3.9	0	0	0	0	36
b. Always do business there	61	13.4	8	2.8	7	2.4	0	0	76
5. Only alternative	182	40.1	78	27.7	76	25.7	—	—	—
a. More likely to get a loan there	66	14.5	21	7.4	4	1.4	—	—	91
b. Don't know any other	54	11.9	38	13.5	3	1.0	—	—	95
c. Only place ever borrowed	16	3.5	2	0.7	3	1.0	—	—	21
d. They never or didn't turn me down	30	6.6	6	2.1	43	14.5	—	—	79
e. Nothing I especially like	6	1.3	4	1.4	19	6.4	216	73.0	—
f. Don't know	10	2.2	7	2.5	4	1.4	1	0.3	22

[a]All reasons farmers gave on why they would select a particular credit source "If (they) desired a $500 loan of 1 year or less for (their) farming operation". See Appendix B, questions 64 and 65 on main questionnaire.

[b]All reasons farmers gave on why they would select a particular credit source "if (they) desired a long-term real estate mortgage loan to expand (their) farming operation." See Appendix B, questions 67 and 68 on the main questionnaire.

[c]Farmers responses on the factors which they liked about the credit sources with which they were dealing. See Appendix B, questions 5 and 6 on loans outstanding questionnaire.

[d]Farmers responses on the factors which they disliked about the credit sources with which they are dealing. See Appendix B, questions 8 and 9 on loans outstanding questionnaire. The characteristics farmers disliked were the reverse of the preferences listed.

CRANES CREST

APPENDIX B

CONFIDENTIAL

Sample Unit Number_____ Schedule Number_____

Name_____ County_____

Address_____ Town_____ Interviewer_____

Race: White_____ Negro_____

UNIVERSITY OF TENNESSEE
Agricultural Experiment Station
Department of Agricultural Economics and Rural Sociology

Attitudes and Opinions of Tennessee Farmers Concerning Credit and Credit Sources

Questionnarie

(B)

1. Acreage: Total in farm _____
   Cropland (excl. woods & past. incl. field & row crops) _____

2. Do you have total yearly sales of over $150? Yes___ No___

3. Tenure status: Owner operator _____
   Renter (over 3/4 land) _____
   Sh. cropper (under 1/2 non R.E. cap.) _____

4. Number of years farm operator? _____years

5. How many of the years between 1930-39 were you on the farm? ___years

6. Age? _____years

7. Last grade schooling completed _____grade.

8. Last grade schooling completed by wife _____ grade.

(A and O)

9. Do you think that farmers in your community are running too much of their business on credit? That is, do they borrow too much money to run their businesses? Yes____ Qual.____ No.____ Don't know____

10. Why?_____

_____

11. Some farmers borrow money in the operation of their farms. Other farmers do not borrow. Which do you believe to be the better farm managers, the borrowers or the nonborrowers?

borrowers	______
nonborrowers	______
either	______
don't know	______

12. You say the (borrowers)(nonborrowers) are the better farm managers. Would you say that this is always the case?______
usually the case?______
or just occasionally the case?______

13. Why do you believe that the (borrowers)(nonborrowers) are the better farm managers?____

____

14. Do you believe that there is anything morally wrong with borrowing money? (probe) Yes____ No____ Don't know____

15. (If yes) what do you feel is morally wrong about it?__________

____

16. Do you believe that when a farmer borrows money he loses any of his freedom to make his own decisions? Yes____ No____ don't know____

17. (If yes) Do you believe it enough to worry about? Yes__ No__

18. (If yes) How does he lose independence?__________________

____

19. Is a farmer justified in borrowing money if he feels pretty sure that it will increase his farm's profits? Yes____ No____ Don't know____

20. (If no) Why do you not feel that he is justified?__________

____

21. (If yes) If he has to give the lender a mortgage on his livestock or crop, do you still think that he would be justified in borrowing the money? Yes___ Qual.___ No___ Don't know___

22. (If yes) Would he be justified if he has to give the lender a mortgage on his farm? Yes___ Qual.___ No___ Don't know___

23. (If no or qual. to 21 or 22) Explain____________________

____

- -

24. If it will increase his profits, do you believe a farmer is justified in borrowing money for fertilizer? Yes___ Qual.___ No___ Don't know___

25. For machinery? Yes___ Qual.___ No___ Don't know___

26. For land? Yes___ Qual.___ No___ Don't know___

27. (If no or qual. to 24, 25 or 26) Explain_____

_____

28. Do you believe that a farmer is justified in using consumer credit? That is, should a farmer borrow money for things to be used in the home? Yes___ Qual.___ No___ Don't know___

29. Why?_____

_____

30. Do you think that people who borrow are looked down upon by their neighbors? Yes___ Qual.___ No___ Don't know___

(W)

31. Is your wife familiar with the business and financial aspects of this farm? Yes___ Qual.___ No___

32. Does your wife generally agree with you on matters concerning borrowing money? Yes___ Qual.___ No___ Don't know___

(B)

33. Have you loaned anyone an amount over $50 in the past 3 years? Yes___ No___

34. (If yes) Was the loan made to a relative? _____
friend? _____
business acquaintance? _____
wage hand? _____
sharecropper? _____

35. Have you ever, at any time, used credit in your farming operation? Yes___ No___

36. (If no) Have you ever, at any time, borrowed money for any purpose whatsoever? Yes___ No___

(K) Scale

	R	DN	W
37. Do private individuals, other than relatives, sometimes make loans to farmers? Yes___ No___ Don't know_	( )	( )	( )

		R	DN	W
38.	Can you give me the name of an individual who makes loans to farmers?_____Don't know__	( )	( )	( )
39.	Is it legal for a private individual to make a real estate mortgage loan to a farmer? Yes__ No__ Don't know__	( )	( )	( )
40.	Do insurance companies ever make farm loans? Yes__ No__ Don't know__	( )	( )	( )
41.	Can you give me the name of an insurance company which makes loans to farmers?_____ _____Don't know__	( )	( )	( )
42.	Which type of loan would you more likely receive from an insurance company, a short-time production loan or a long-time mortgage loan? short-term__ long-term__ don't know__	( )	( )	( )
43.	Do government regulations make all local banks charge the same interest rate? Yes__ No__ don't know__	( )	( )	( )
44.	Do you think that making loans is a major part of a bank's business or just a sideline? major part__ sideline__ don't know__	( )	( )	( )
45.	What do the initials P.C.A. stand for?_____ _____Don't know__	( )	( )	( )
46.	Where is the nearest office that you can obtain a loan from the Production Credit Association?_____ _____Don't know__	( )	( )	( )
47.	What interest (only) rate does the Production Credit Association charge for loans?_____Don't know__	( )	( )	( )
48.	Where is the nearest office that you can obtain a loan from the National Farm Loan Association-Federal Land Bank?_____Don't know__	( )	( )	( )
49.	Does the National Farm Loan Association-Federal Land Bank charge the same interest rate to both large and small farmers? Yes__ No__ don't know__	( )	( )	( )
50.	What interest rate does the National Farm Loan Association-Federal Land Bank charge for loans?____ Don't know____	( )	( )	( )

	R	DN	W
51. Are the carrying charges on dealer installment credit (that is, buying something with a down payment and the rest on time) usually lower than the interest rate at a bank for a similar loan? Yes___ No___ Don't know___	( )	( )	( )
52. Will a dealer sometimes give a discount for cash that he won't give if the sale is made on time? Yes___ No___ Don't know___	( )	( )	( )
53. Will dealers sometimes give a discount for volume purchases? Yes___ No___ Don't know___	( )	( )	( )
54. Is there in existence any government agency which makes loans to farmers who cannot get adequate credit elsewhere? Yes___ No___ Don't know___	( )	( )	( )
55. What is the name of this agency?_____ _____Don't know_____	( )	( )	( )
56. Where is the nearest loan office of the Farmers Home Administration (F.S.A.)?_____ _____Don't know_____	( )	( )	( )
Total	___	___	___
57. Is the Production Credit Association government owned or farmer owned? government owned___ farmer owned___ don't know___	( )	( )	( )
58. Do its borrowers have a vote in determining the policies of the National Farm Loan Association-Federal Land Bank? Yes___ No___ Don't know___	( )	( )	( )

(c) Charge Accounts

59. About what proportion of your total yearly purchases at each of the following places are made on charge account or open book credit?

	% on charge acct.	% over 30 days	interest (x if yes)	cash disc. (x if yes)	Name of store
a) Farm supply store	___%	___%	___	___	_____
b) Grocery store	___%	___%	___	___	_____
c) Gas and oil co.	___%	___%	___	___	_____

60. About what proportion of your charge account purchases at each place did you let run over 30 days?

61. Was there any interest charge made when they ran over (30)(60) days?

62. Could you have received a discount on the price if you had used cash instead of charge account?

(SP) Source Preferences

63. If you desired a $500 loan of 1 year or less for your farm operation, to what credit source would you apply?_____

64. Why would you select this source rather than some other source?

_____

65. Any other reasons?_____

_____

66. If you desired a long-term real estate mortgage loan to expand your farming business, to what credit source would you apply?_____

67. Why would you select this source rather than some other source?___

_____

68. Any other reasons?_____

_____

69. Do you think that a farmer who desires a loan should see about getting the loan from a relative or close friend before he goes to a bank or other credit agency? Yes___ No___ Qual. yes___
Poor relatives___ Don't know___

70. Why?_____

_____

71. Do you think a lender is justified in asking for a financial statement and expected income figures from a borrower before lending him the money? Yes___ Qual.___ No___ Don't know___

(B)

72. Do you work off the farm any during the year? Yes___ No___

73. What proportion of your income comes from off-farm work? ___%

Gross Sales:

74. Total last year $_____

75. Livestock & livestock prod. $_____ Crops $_____

76. Tobacco $_____

77. Cotton $_____

78. Major enterprise_____ $_____

Are you using credit in any form from any of the following?

		Present time	Past 3 years
79.	Production Credit Association	_____	_____
80.	National Farm Loan Association	_____	_____
81.	Bank	_____	_____
82.	Insurance Company	_____	_____
83.	Finance Company	_____	_____
84.	Private individual	_____	_____
85.	Merchant or dealer installments	_____	_____
86.	Farmers Home Administration	_____	_____
87.	Other_____	_____	_____

Borrower___ Nonborrower___

88. In the past 3 years have you ever given serious through to the possibilities of expanding your farm operation through the use of (more) credit? Yes___ No___

89. (If no) Why have you not considered it?_____

_____

90. (If yes) Why did you decide against it?_____

_____

91. (If yes) Did you ever draw up such a plan on paper? Yes__ No__

92. Do you believe that at the present time (more) credit could increase the profits on your farm? Yes__ No__ Don't know__

93. (If yes) Why do you not use it?_____

_____

94. (If no) Why do you think credit cannot increase your profits?

_____

_____

(IA) Interviewer appraisals

	Husband	Wife (if sitting in)
95. Amount of deliberation concerning credit matters.		99.
Very deliberative	( )	( )
Deliberative	( )	( )
Somewhat deliberative	( )	( )
Slightly deliberative	( )	( )
No deliberation	( )	( )
96. General awareness		100.
Very aware	( )	( )
Aware	( )	( )
Somewhat aware	( )	( )
Slightly aware	( )	( )
No awareness	( )	( )
97. General attitude toward credit.		101.
Strongly in favor	( )	( )
In favor	( )	( )
Neutral	( )	( )
Against	( )	( )
Strongly against	( )	( )
98. Receptiveness to questions.		102.
Very receptive	( )	( )
Receptive	( )	( )
Little receptiveness	( )	( )
No receptiveness	( )	( )
Hostile	( )	( )

103. Final decision dominated by

Husband_____
Wife_____
Both_____
Questionable_____

Schedule Number_____

(LO)

Analysis of Loans Outstanding

Name of borrower_____
Interviewer_____

1. Source of loan_____

2. Address of source_____

3. Amount of loan $_____ Amount outstanding $_____

---

4. Date borrowed_____ Purpose:
5. Date due_____
6. Length of loan_____

---

7. Are you satisfied with this loan source? Yes___ No___

8. What things do you like about this loan source?_____

_____

9. Anything else?_____

10. What things do you dislike about this loan source?_____

_____

11. Anything else?_____

12. Before borrowing the money, did you consider any other loan sources to get this loan? Yes___ No___

13. (If yes) What source(s)?_____

14. (If yes) Why did you not borrow from this source?_____

_____

15. (If no) Why did you not consider any other source?_____

_____

16. Was this loan refused by any credit source? Yes___ No___

17. (If yes) What source?_____

18. How much interest do you pay on this loan? ____% per year
$____ per year

19. Are there any charges besides interest on this loan? Yes___
No___ Don't know___

20. (If yes) What are they?_____

_____

_____

21. Do you know of any credit source which lends at a lower rate of interest than this? Yes___ No___

22. (If yes) What source?_____

23. (If yes) Why did you not borrow from this source?_____

_____

24. Did you yourself ever figure the true interest rate on this loan?
Yes___ No___

25. Actual amount received from loan $_____

26. Charges:

27.	Interest	____% of_____	$_____
28.	Service charge	____% of_____	$_____
29.	Non-use of cash discount	____% of_____	$_____
30.	Appraisal charge	____% of_____	$_____
31.	Recording charge (or insur.)	____% of_____	$_____
32.	Title search		
33.	Surveying charge		
34.	Other_____	____% of_____	$_____
	_____	____% of_____	$_____
	Total finance charge	____% of_____	$_____
		Total	$_____

35. Total amount to be repaid $_____

36. Number repayment periods in year_____

37. Total number repayment periods for loan_____

38. Yearly finance charge $_____

39. True annual interest rate _____% per year

---

40. If you wish, do you believe that you can renew this loan when it comes due? Yes___ No___ Don't know___

41. Did you seek anyone's advice before making this loan? Yes__ No___

42. (If yes) Whose advice did you seek?

Co. agent	_____
Friend	_____
Family	_____
Lawyer	_____
Acct.	_____
Banker	_____
Other_____	_____
_____	_____

43. Where did you first hear about this loan source?_____

44. Why did you go to this loan source?_____

_____

Interviewer appraisal:

45. Loan was (1) habitual_____
(2) result of unforeseen circumstances_____
(3) planned_____

Schedule Number _____

(PL)

Analysis of Past Loan Sources
(3 years)

Name of borrower _____
Interviewer _____

1. Name of lender _____

2. Location _____

3. Amount of loan _____ Collateral _____

4. Purpose(s) of loan _____

		Yes	No
5.	Do you think that there was too much red tape?	—	—
6.	Why? _____	—	—
7.	Do you think that there was a friendly attitude on the part of the personnel?	—	—
8.	Do you think the cost of the loan was too high?	—	—
9.	Do you think that the repayment period allowed was long enough?	—	—
10.	Do you think that there was too much supervision on the loan?	—	—
11.	Do you feel that the personnel who gave you the loan had a good understanding of farmers' problems?	—	—
12.	Was the agency in a convenient location?	—	—
13.	Do you feel that they wanted too much personal information from you before they gave you the loan?	—	—
14.	Do you feel there was sufficient privacy when you talked over the terms of the loan?	—	—
15.	Would they loan you as much money as you thought you needed?	—	—
16.	Would you go back to this loan source for another loan?	—	—