Differences in consumer credit attitudes, knowledge and experiences among married and non-married women in Des Moines, Iowa

Karen Bruner Hull
Iowa State University

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NON-MARRIED WOMEN IN DES MOINES, IOWA.

IOWA STATE UNIVERSITY, PH.D., 1978

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Differences in consumer credit attitudes, knowledge and experiences among married and non-married women in Des Moines, Iowa

by

Karen Bruner Hull

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

Major: Home Economics Education

Approved: Members of the Committee: Signature was redacted for privacy. Signature was redacted for privacy.

In Charge of Major Work

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For the Major Department

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For the Graduate College

Iowa State University
Ames, Iowa

1978

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INTRODUCTION

Numerous regulations have gone into effect at all levels of government which require sellers to provide consumers with specific information. For example, the passage of the federal Truth in Lending law in 1968 was the first of several credit regulations at the federal and state levels. Information about the cost of credit and standardization of terms were required by the Truth in Lending law. Thus interested consumers can use the information, compare alternatives and select the credit source that best fits their needs.

Knowledge of the provisions is essential for consumers to fully benefit from the regulations. Consumers who know (1) that the regulations exist and (2) what information is required can use the information to make wise credit choices. Regulations requiring disclosure of information can benefit both consumers and creditors. Consumers who seek and use the information benefit from making credit choices that best fit their needs. Creditors who provide honest information and offer credit which best meets consumers' desires benefit from consumer business.

Consumers who lack knowledge about provisions can not fully benefit from credit regulations. Unknown rights can not be exercised. Opportunity costs may result from suboptimal credit choices.

There is little empirical evidence on how effective the existing regulations are in terms of consumers' knowledge of the provisions.
Before additional laws are enacted, research is needed to ascertain how much consumers know about existing regulations.

Most of the available studies focused on Truth in Lending and were done about the time the law went into effect. Little research appears to have been conducted on the newer credit regulations or the current level of knowledge of Truth in Lending.

No known reported research focused on women's knowledge of credit regulations. With women gaining new credit rights and exercising a greater role in family financial management and as consumers and producers in the marketplace, it is important to ascertain their knowledge and attitudes about credit regulations.

There is no known model to predict consumers' knowledge of credit regulations. A model of the variables and their relationship to knowledge of credit regulations is needed and would contribute insight to the body of knowledge of consumer behavior.

A well designed research project is needed to ascertain women's knowledge level of credit regulations and the variables that affect knowledge. Identification of factors which influence credit knowledge is important for designing educational programs and future legislation to increase consumer credit competence. Ascertainment of women's knowledge of credit regulations is needed to plan and direct educational programs to segments of consumers who need to increase their expertise. The present study attempts to fill these needs.
The objectives of this study were to assess the level of women's knowledge of credit regulations and the factors that affect knowledge. The factors included socioeconomic and demographic variables, attitudes about the need for government regulations to solve credit problems, the conservative/liberal orientation to public issues and credit experience. More specifically, the objectives were to:

1. ascertain the relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, credit experience, conservative/liberal orientation to public issues and education.

2. assess the relationship between credit experience and age, marital status and socioeconomic status.

3. identify the relationship between conservative/liberal orientation to public issues and credit experience, age and education.

4. explore the relationship between attitudes about the need for government regulations to solve credit problems and conservative/liberal orientation to public issues, credit experience, age and marital status.
THEORETICAL FRAMEWORK

The purpose of this chapter is to develop a theoretical framework for the present study. The resulting model will serve as a basis for generating hypotheses to be tested in this study. Because this is the first known study of women's knowledge of credit regulations, the model and resulting analysis will provide a basis for extending the knowledge in the field of consumer behavior and for communicating to others the relationships of the selected variables to knowledge of consumer credit regulations.

Numerous regulations which provide consumers with more information about the marketplace have gone into effect at all levels of government. Hundreds more are pending and advocated. Little is known, however, about the effectiveness of providing additional information to consumers. This study focuses on one area: federal consumer credit regulations. Both attitudes about the need for such protection and knowledge of existing regulations are included.

From a conceptual basis, one of the reasons for concern about the level of consumers' knowledge of their rights provided by consumer credit regulations is the assumption in economics of perfect knowledge to maximize satisfaction in pure competition. Under this assumption, consumers have perfect knowledge of alternative ways to allocate money, realize the importance of having credit information, know how to obtain and use the information in making efficient choices in the marketplace.
Even if this assumption is relaxed to possessing knowledge of only relevant data acquired as consumers implement and revise their plans, accurate and available information is still important.

The focus of many of the consumer credit regulations has been to disclose information which could help a consumer make wise choices. Proponents of providing information about credit say it can improve the marketplace and the welfare of consumers. Consumers can gain from having meaningful information in order to make wise choices. Standardizing the terms, disclosures and practices can help consumers make comparisons as they shop. Competition among creditors based on credit interest rates may increase.

From a public policy viewpoint, government agencies responsible for enforcement, elected government representatives, consumer activists, creditors and consumer educators need to know the effectiveness of consumer legislation on consumer knowledge and behavior. The relative newness of the credit regulations is one reason for the lack of empirical evidence about their effectiveness. The costs of providing information have received more attention than the value of disclosing information to interested consumers. Related concerns include how available information is used, how much information is needed, what type of information is most meaningful and who is responsible for providing it.

Another reason for the numerous regulations requiring disclosure of information is the "consumer's right to know." One of the basic
rights of consumers is to have access to accurate information. Not all consumers can be expected to use it, but for those who want to know, this consumer right places the responsibility on the seller to provide the information.

An investigation of the literature revealed little previous research about awareness of consumer credit regulations other than Truth in Lending. The work on Truth in Lending is limited, the results are not consistent and the variables studied did not explain the variation in knowledge of the regulation satisfactorily. In addition, there is a scarcity of empirical evidence concerning women's use of credit, their knowledge of related regulations and their problems in obtaining credit due to sex and marital status. This chapter will be concerned with research on knowledge of credit regulations, supportive attitudes about the consumer movement, effect of conservative/liberal orientation on consumer behavior and selected models of consumer behavior and credit decisions. The purpose of the review is to develop the conceptual framework for this study which is presented near the end of the chapter.

Knowledge of Credit Regulations

Several previous studies concerned Truth in Lending, the first of several major consumer credit regulations. The focus of most of these studies was to ascertain knowledge of the annual percentage rate or the dollar finance charge for a given purchase situation. A few previous studies in much less detail assessed awareness of other credit regulations.
Using data from the Surveys of Consumer Finances, Mandell (1971, 1973) selected only those persons who had purchased a car within a year of the interview, financed at least $500 of it on installment credit and answered the question on estimating interest. The actual rate of interest paid on the automobile loan was calculated on the basis of information given by the respondents. An index of accuracy was computed to compare the actual rate with the rate estimated. Mandell found more consumers to be aware of the interest rate paid after Truth in Lending than before. However, borrowers were still largely unaware; only one tenth could estimate within a 10% margin of error and nearly one half had 50% or more margin of error.

Using multiple regression analysis, age and income added virtually nothing to the total explanatory power of the differences in knowledge of the interest rate. Education, total debt and amount of the automobile loan taken together explained only 12% of the total deviations from the mean accuracy in the period before and only 5% after Truth in Lending went into effect. The multivariate analysis results indicated that the most important determinant before and after Truth in Lending was the amount borrowed to finance the car which had more than half the total explanatory power of all the variables. Although education had the least explanatory power in both cases, it showed a large gain in the survey conducted after the regulation went into effect while the other variables lost explanatory power.
The results of the 1969 and 1970 Federal Reserve Surveys of Consumer Awareness of Finance Charges and Interest Rates were analyzed by Shay and Schober (1973). Telephone interviews were completed with a sample of 4,727 in 1969 and 4,706 in 1970. In addition, personal and telephone interviews were conducted with over 400 people living in poverty areas in 1969 and 1970. The two interviews were conducted 15 months apart to compare changes in awareness before and after the Truth in Lending law went into effect. A respondent was assumed to be "aware" if she could estimate the annual percentage rate for credit within the range of rates commonly charged in the marketplace.

In June 1969, 14.5% of installment credit users could reasonably state the annual percentage rate they were charged; the proportion was 38.5% in October 1970. Thus, levels of consumer awareness of annual percentage rates increased substantially in the 15 month period from low levels for closed end credit. Respondents who were most aware were likely to have incomes over $10,000, have heard of the federal law and have some college education.

For retail revolving open end credit, respondents most aware were likely to have some college education and have heard of the law. For bank credit cards, a second type of open end credit, those most aware were likely to have some college education and be under 35 years of age.

Day and Brandt (1973, 1974) investigated decisions on credit using data from personal interviews of a probability sample of 643 California heads of households in October 1970 and reinterviews with
a subsample in July 1971. Knowledge of annual percentage rates was measured by: (1) comparing perceived annual percentage rates for a hypothetical $1,000 car loan and (2) creating awareness zones defined by normal minimum rates for different types of credit. The results showed that although Truth in Lending had been in effect for 15 months, only 19% of car buyers and 13% of buyers of durable goods could correctly estimate both the annual percentage rate and the finance charge.

This study was more comprehensive than the earlier Federal Reserve Surveys as it included measures of: (1) financial status, (2) conditions preceding the purchase, (3) details of the purchase, (4) credit experience and attitudes about using credit and (5) awareness of the provisions of Truth in Lending. Knowledge of annual percentage rates for actual purchase of a car indicated that sex (male) was most highly associated with awareness. For household durables, education and credit experience also had strong positive relationships.

In addition to actual purchases, the researchers used a hypothetical situation to evaluate awareness. Education was the most influential determinant of annual percentage rate knowledge; sex, credit experience and ratio of monthly payments to income were also influential. Education, race and attitudes toward credit use were significant determinants of awareness of dollar finance charges in the hypothetical situation. Respondents were more likely to know annual percentage rates than the
dollar finance charge. Financial security and conditions related to the purchase decision were the strongest influences on knowledge of finance charges. Those with more favorable attitudes toward the use of credit were not as likely to recall or notice finance charges.

Credit experience, in this study a credit purchase, was found to be important in retarding the forgetting of annual percentage rates from the first to second interview. However, credit experience had little or no incremental effect on learning the correct rate.

A study by Deutscher (1973) also was designed to evaluate the effectiveness of Truth in Lending and was done two years after the law went into effect. A subsample of the 196 respondents from the Day/Brandt survey of September 1970 was reinterviewed in June 1971. Sixty-one percent of consumers were aware of the legislation, based on unaided recall. Making a credit purchase between interviews did not make a difference on learning about the regulation. Results of the regression analysis indicated that none of the credit-related effects including general experience with credit, use of credit in the past nine months and search for information about credit in the past nine months and none of the attitudinal variables had significant influences on learning. Instead those who learned tended to be more affluent and well educated. However, when forgetting or decreased awareness was considered, credit experience was the most significant variable. Education was also significant in the reduction of forgetting.
Using the data base from the 1969 and 1970 Federal Reserve Board surveys, Parker and Shay (1974) attempted to measure the separate contribution of income, age, education, region of the country, race, poverty area residence, knowledge of the existence of the Truth in Lending law, homeownership and sex to improved awareness of annual percentage rates.

Results of multiple regression analysis indicated five of the nine variables were significantly related to awareness: education, knowledge of the existence of the Truth in Lending law, poverty area status, race and income. The first two variables were the most closely associated with differences in the early annual percentage rate awareness and gains in annual percentage rate awareness by users of both open and closed end credit. The differences in awareness of annual percentage rates among borrowers categorized by independent variables grew between the two periods. That is, those lower than the mean awareness in 1969 were further below the sample mean in 1970.

Turpin (1973) focused on the awareness of Truth in Lending of the blue collar working class using an adaptation of the questionnaire from the 1969 and 1970 Federal Reserve Board surveys. The "main money manager" was interviewed in a sample randomly drawn from census tracts in a major city in Ohio. Turpin found no significant differences between the sexes in understanding the law, even though females in this sample had more formal education. The sample as a whole had
greater ignorance about Truth in Lending than the total United States sample in the 1970 Federal Reserve study. Level of formal education was positively correlated with knowledge of Truth in Lending.

A more recent study that was done by Cunningham and Cunningham (1976) had broader coverage of regulations other than Truth in Lending, but had less depth than the studies previously mentioned. Knowledge of consumer law was investigated, four areas related to consumer credit: credit regulations, credit reporting, credit cards and Truth in Lending. A mailed questionnaire was sent to a random sample of 2,200 households drawn from the telephone directory in a medium sized Texas city. The "lady of the house" was asked to respond for a married couple. Significant differences between income groups were found only in the area of Truth in Lending; lower income groups had less knowledge. In the nine other areas of the law, no significant differences were found in amount of knowledge by income level.

Tootelian (1975) focused on the Arizona "cooling off" law which permits cancellation of a credit contract sold by a door-to-door salesperson. Differences in attitudes, knowledge and purchase patterns of respondents in high, middle and low income areas of a large Arizona city were investigated. A three stage design was used to select the probability sample; 272 interviews were completed (about one-third from each income area). A five point Likert type scale was used to measure attitudes about direct salespersons and their products and the
viability of consumer protection laws including the state cooling off law. Knowledge of that law was measured by responses to four open ended questions. Respondents in the low income area had less knowledge than the other two groups.

Among a sample of 440 low income borrowers of small cash loans in three Texas cities, Durkin (1975) found that awareness of annual percentage rates was very low, only 2.5%. However, 64.3% were aware of the dollar finance charges on their loans. Six variables were found to be good predictors of awareness of finance charges when other influences were held constant. The variables were race, sex, marital status, income, employment type and cash credit sources used.

Samuels (1975) interviewed 50 married women, 40 years of age or younger. The sample was obtained from a school census in Ames, Iowa. The women were asked if they were familiar with the provisions of the federal Truth in Lending law but were not asked specifically about the provisions. Fifty-two percent said they were not familiar with the law, 24% were familiar with it and 24% were not sure. In a cross tabulation of the data, the author concluded that awareness of the existence of Truth in Lending seemed to increase with education.

Most of the previous research related to Truth in Lending was on knowledge of the annual percentage rate or the dollar finance charge in a given situation, and some studies investigated awareness of the existence of credit laws. The designs of the studies differed and the results are not consistent. However, Mandell (1971, 1973), Shay and
Schober (1973), Day and Brandt (1973, 1974), Deustcher (1973), Parker and Shay (1974), Turpin (1973) and Samuels (1976) found education and Mendell (1971, 1973), Shay and Schober (1973), Deutscher (1973), Cunningham and Cunningham (1976), and Durkin (1975) found income related to knowledge of credit costs or awareness of the existence of the law. A few studies with less detail included other credit regulations, the results seemed to indicate income was associated with knowledge (Tootelian, 1975 and Cunningham and Cunningham, 1976).

Supportive Attitudes About the Consumer Movement

The present study concerns attitudes about the need for government regulations to solve credit problems. None of the research on consumer credit knowledge included this dimension. Because support for these consumer regulations and the consumer movement can be viewed as a form of social protest, it is appropriate to review studies on support for social protests and consumer issues.

Herrmann and Warland (1976) investigated the characteristics of people with a range of attitudes regarding Ralph Nader and his programs. In 1972, telephone interviews were conducted with 1215 adults in a nationwide random stratified sample. The respondents were classified into six categories: (1) unaware (15.2%), (2) uninformed (22.9%), (3) supporters (18.4%), (4) sympathizers (18.9%), (5) undecided (20.2%) and (6) rejectors (4.5%). Groups three and four above were
combined for a total of over 37% with a favorable view. Those who were unfamiliar with Nader's cause (groups one and two) were older, less educated and had lower incomes. The remaining groups who were familiar with Nader's cause differed little except on political orientation. Only the group who supported Nader had more liberals (47%) than conservatives (39%).

Respondents were asked their opinion on a number of consumer issues including whether the government should require all companies to provide proof of accuracy of advertising claims. Because this question was related to government regulation, it may provide insight for this study. Seventy-nine percent of the sample strongly favored it. A substantial percentage of the group who supported Nader indicated a high level of concern about the other issues as well.

Although using a decompositional rather than a causal model, Herrmann and Warland found a liberal political orientation to be positively associated with a favorable attitude about Nader and his programs. Respondents unfamiliar with Nader's cause were likely to be older, less educated and had lower incomes.

Olsen (1968) investigated the extent of public acceptance of various types of nonviolent social protest actions and the relationships with social, economic, political and demographic variables. Interviews with a population that was predominately upper middle class urban whites in Ann Arbor, Michigan, found an overwhelming acceptance of the basic
goals of the civil rights movement. However, only 31.2% of the respondents approved of all five means of social protest. Education was positively correlated with approval of social protest; the higher a person's education, the more likely the respondent was to approve of all the means of protest studied. Occupation and income were also positively correlated with approval. Age had a negative relationship; younger persons were the most accepting. Democrats were the most accepting of actions, followed by Independents and then Republicans, but the correlation was weak.

Using multivariate analysis, education, age, sex and political preference together explained 23% of the variance of acceptance of social protest activities, while education alone accounted for 16%. Further analysis indicated that education had a curvilinear relationship with positive attitudes toward social protest. The most tolerant were persons with a graduate education followed by persons with eight or less years of education.

Friedman (1971) studied the characteristics of leaders of the consumer protests against high food prices in the fall of 1966. A mailed questionnaire was sent to participants who could be identified through newspaper reports, through state consumer organizations and through participants who named others in their protest group. Friedman found that education, income and occupation directly correlated with
acceptance of protest action and also found an inverse relationship with age. He also found more Democrats than Republicans in those surveyed but when asked to report on their local group members, an equal number were thought to be Democrats and Republicans. However, these findings can not be generalized beyond this limited sample because respondents were a small unique group of protest leaders and not selected by chance from a representative population.

In a study concerning philosophy about business and consumerism, Barksdale and Darden (1972) found that over 68% agreed that the government should exercise more responsibility for regulating advertising, sales and marketing activities of manufacturers and 77.1% indicated that a federal Department of Consumer Protection was needed. Little differences were found in attitudes according to most of the independent variables. However, age and political predisposition were associated with opinions. The younger respondents (77.4%) felt more government regulation was needed. Liberals were more critical than conservatives of marketing practices and more optimistic about the consumer movement. Both strongly supported the need for a federal Department of Consumer Protection, liberals 89.6% and conservatives 61.7%.

Although not a study of attitudes about the consumer movement, the study by Anderson and Cunningham (1972) of the determinants of social consciousness is related because the consumer movement includes
a concern for social consciousness. The researchers analyzed 412 returned questionnaires mailed to a random sample in Austin, Texas, to determine the extent to which consumers who differ by degree of social consciousness may be distinguished by selected demographic and sociopsychological attributes.

Respondents were classified according to the results of a test for social responsibility as belonging to the upper or lower half of the sample. Higher occupational attainment and socioeconomic status and younger household heads characterized the high socially responsible group. According to the sociopsychological variables, those in the high socially responsible group were more cosmopolitan and less alienated, dogmatic, conservative, status conscious and personally competent. These variables alone were more effective in differentiating the groups than when combined with the demographic variables.

Hustad and Pessemier (1973) reported a study of 912 married women's opinions about marketing practices; none of the practices related to credit. Cluster analysis identified three groups of women: pro-business, anti-business and uncommitted. Only two of the nine socioeconomic variables studied significantly differentiated these three groups: husband's employment status and the respondent's educational achievement. The anti-business group had the highest levels and the pro-business had the lowest levels on both of these measures.
Several of the previous studies concerned the characteristics of persons supportive of consumer issues and social protests. Olsen (1968), Friedman (1971) and Hustad and Pessemier (1973) found more education and Olsen (1968), Friedman (1971) Barksdale and Darden (1972) and Hustad and Pessemier (1973) found younger age were associated with greater support. Herrmann and Warland found respondents unfamiliar with Nader's cause were more likely to be older, less educated and had lower incomes. Thus age, income and education may be important variables in predicting support for credit regulations in the present study.

Effects of Conservative/Liberal Orientation on Consumer Behavior

None of the studies on credit knowledge included a variable related to conservative/liberal orientation to public issues. However, studies were found on consumerism that relate to one's conservative or liberal position. Because consumer regulations are a part of the consumer movement, it was appropriate to review these for possible insight for the present study.

There has been considerable writing in political science about the differences between rightists and leftists. McClosky (1974) described studies on elements of personality related to conservative-liberal beliefs. He constructed and pretested a
conservatism scale. The scale was used in two separate studies with large samples and resulted in similar findings. In both studies, the conservatism scale was used to divide the sample into quartiles: extreme conservative, moderate conservative, moderate liberal and liberal. McClosky (1974, p. 267) concluded that one of the clearest findings was "by every measure available to us, conservative beliefs are found most frequently among the uninformed, the poorly educated, and so far as we can determine, the less intelligent." When education and other factors were controlled, the range of scores varied with occupation, education and knowledge, but the direction and magnitude of the differences between conservatives and liberals were consistent for all status and education levels. McClosky concluded that personality factors seem to contribute a fairly uniform influence on the formation of conservative or liberal outlooks regardless of social levels. Another pertinent finding was that conservatives fear change which may relate to not supporting the need for or being informed about new regulations studied in the present research.

There is evidence that activists have a more liberal orientation than the population as a whole. Burrell's (1975) study of 354 participants in the 1973 convention of the Iowa Women's Political Caucus gave information on that group of Iowa women. Participants listed themselves as extreme liberal (20%), liberal (53%), slightly liberal (15%), moderate (6%), slightly conservative (4%), conservative
(2%) and extreme conservative (0%). Burrell compared participants' orientation to a 1971 Iowa poll, a random sample of the population of the state, when 54% of Iowans considered themselves conservative, 34% liberals and 12% undecided. Participants ranked issues according to importance, consumer protection was one of the 17 broad issues evaluated. It ranked second as a personal issue and sixth as a women's issue.

Previous studies indicate liberals may be more likely to be intelligent and social activists than conservatives. Thus conservative/liberal orientation to public issues may be an important variable in predicting support for the consumer movement as well as knowledge of credit regulations.

Credit Availability to Women

Little empirical research was found on problems women have in obtaining credit due to sex or marital status. However, there are many individual cases reported in court testimony, government hearings and law journals (Brown (1973), Mandell (1972), Garrison (1976), Lally (1974), Littlefield (1973)). The majority of these references focus on the situation prior to the passage of the federal Equal Credit Opportunity Act and many urged passage of the act. Complaints received by enforcement agencies since the act went into effect indicate numerous violations and subtle ways
still permit legal discrimination according to sex and marital status in the granting of credit.

Goulet (1975) studied credit availability to women using data from a United States sample of 1436 families interviewed in 1967, 1968, 1969 and 1970 by the Survey Research Center at the University of Michigan. Female heads of families who worked were compared with male heads of families (single or if married, without a working wife) and married male heads of families whose wives worked full time were compared with male heads whose wives did not work in the labor force.

The results of regression analysis indicated that the debt behavior of female headed families was different from that of one earner male headed families. Using co-variance analysis, the study found the effects of income, age and education on the level of debt outstanding for female headed families to be significantly different than that of male headed families. When the married male heads with working wives were compared with those with non-working wives, a similar debt behavior was found when age, income, liquid assets and durable purchases were used to explain levels of debt. For a given level of installment debt, female borrowers had higher incomes, tended to be older and better educated than male borrowers. Goulet concluded that female heads of families in this study were subject to discriminatory treatment because they had not been granted as much credit.
Little research was found on problems of credit availability due to sex or marital status. The references found were completed prior to the federal Equal Credit Opportunity Act which addresses these problems. The available evidence indicates that women have been subject to discrimination in obtaining credit. The present study investigates credit denial to women as well as other experiences related to credit regulations.

Selected Models Related to Consumer Behavior and Credit Decisions

Of all the research cited previously on awareness of consumer credit regulations, few apriori conceptual models were presented. None were directly applicable to the present study.

Day and Brandt (1974) presented the most comprehensive conceptual model (Figure 1) which is basically a consumer decision model adapted to a decision to purchase a major durable or automobile on credit. Knowledge of Truth in Lending terms was treated as an intervening variable. The research results indicated that Truth in Lending information influenced attitudinal components: (1) perceptions of the relative costs of alternative credit sources and (2) attitude toward the benefits versus the costs of credit.

Day and Brandt (1973) also presented a condensed version of their model of the consumer decision process (Figure 2). Knowledge of Truth in Lending was a part of the search for alternatives step.
Figure 1. A credit decision oriented view of the consumer decision process (Day and Brandt, 1974, p. 24)
Recognition of Need
- change in family needs or income
- replacement
- dissatisfaction with existing alternatives

Planning
Preliminary decisions regarding immediacy of need, product type, price range, scope of search and use of cash vs credit

Information Acquisition
- personal sources (friends, relatives, salesmen)
- impersonal sources (advertising displays, labels, etc.)

Decision to use cash credit, or postpone purchase
Cash
- postponement
- credit

Choice of dealer or retailer
Choice of dealer or retailer

Determination of credit availability
Search for credit source other than dealer

Purchase Decision
Choice of credit source and credit plan

Cash credit
- banks
- credit unions
- finance companies

Sales credit
- dealer provides or arranges for credit

Post-purchase Experience

Payments
- charge account bill
- installment payment notice

Model of Impact of Truth in Lending

Exposure to TIL Information on APR and charges
- contract for present purchase
- experiences from past purchases
- word of mouth
- education efforts

Attitude toward costs and benefits of credit

Mediated by availability of cash and urgency of need

Knowledge of APR and charges for a specific contract

Knowledge of prevailing rates and relation of rates and charges

Perception of relative costs alternative credit sources

Mediated by attitude toward dealers and credit sources

Recognition of Need
- change in family needs or income
- replacement
- dissatisfaction with existing alternatives

Exposure to TIL Information on APR and charges
- contract for present purchase
- experiences from past purchases
- word of mouth
- education efforts
A review of the literature finds a wealth of consumer behavior models in the area of business administration and psychology but a lack in family/consumer economics. The general orientation of the available models was to predict or explain consumer purchase decisions or attitudes. Although none related to knowledge of government regulations as the end product, some of the variables and processes used were applicable to the present study.

Lavidge and Steiner (1961) developed a stair step model (Figure 3) called the hierarchy of effects model for consumer awareness of advertising related to purchase decisions. The authors related the six steps in their hierarchy model to the major functions of advertising: (1) information or ideas, (2) favorable attitudes or feelings about a product and (3) purchase of the product. These three advertising functions correspond to the three dimensions of behavior: cognitive, affective and conative. Again, knowledge is a part of this model. However, knowledge is not the end product nor is the specific knowledge component the knowledge of
government regulations. The components and the process are useful for adaptation for the present study.

Aaker and Day (1974) used the Lavidge and Steiner model with a national probability sample and looked at advertising, attitude about brands of instant coffee and brand market share relationships. The researchers found that advertising influenced both brand awareness and attitude, and that these variables influenced behavior. The finding that the influence of advertising went directly from awareness to behavior, skipping attitude, only partially supported the Lavidge and Steiner model. The researchers also found behavior influenced attitudes. This direction is the reversed flow of Lavidge and Steiner's model. The variables in the process and the finding that behavior influenced attitudes are useful in the conceptual model in this study.

Healey (1976) proposed another model of purchase behavior with three main elements: (1) awareness/effect of advertising, (2) intention to buy and (3) purchase/current usage of products (Figure 4). The results of the analysis found a poor correlation between the exogenous and endogenous variables. The poor predictive power of the first stage led to poor performance for the model. The author concluded that the results
Endogenous Variables

Advertising Awareness

Intention to Buy

Purchase/Current Usage

Exogenous Variables

Education

Age

Income

Past Usage of Product Class

Figure 4. A model of communication impact and consumer response (Healey, 1976, p. 386)
were consistent with results of other research: demographic, socio-economic and personality variables were poor predictors of behavior and if predictions were to be improved, some endogenous variables must be changed to exogeneous variables.

The Howard and Sheth model of consumer behavior is a comprehensive model oriented toward a purchase decision. Figure 5 is a simplified version of the Howard and Sheth model presented by Engel, et al. (1973). This model deals with rational choice decisions. Markin (1974) classifies the Howard

![Figure 5. Howard and Sheth's model of buyer behavior (Engel, et al., 1973, p. 38)](image)

and Sheth model as a stimulus-response learning model based on learning theory, cognitive theory and exploratory behavior theory. The model is divided into three basic elements: inputs, outputs and the "blackbox" or hypothetical constructs which consist of internal variables and processes
termed perceptual and learning constructs. The input and output variables are easier to measure, the hypothetical constructs are more abstract. In addition, there are seven exogeneous variables that influence these hypothetical constructs: the importance of purchase, personality variables, social class, culture, organization, time pressure and financial status. They are included to help take into account differences among buyers in order to reduce unexplained variation and improve the relationships in predicting the output variables in the model. The definitions of the variables given in Engel, et al. (1973, p. 38 and 39), follow:

(1) Output Variables
Attention: A buyer's response indicating the magnitude of his information intake.
Brand comprehension: A verbal statement about brand knowledge in a product class.
Attitude: A verbal evaluation of the potential of a brand to satisfy motives.
Intention: A verbally stated expectation, made in cognizance of possible extenuating factors, that he will buy the most preferred brand the next time this action is necessary.
Purchase: The overt act of buying.

(2) Learning Constructs
Motives: Buyer goals impinging upon a buying situation.
Brand comprehension: Knowledge of existence and characteristics of those brands which form the buyer's set of alternatives (called the "evoked set").
Choice criteria: An ordered set of motives relevant to the product class under consideration.
Attitude: Relative preferences of brands in the evoked-set based ratings along the choice criteria.
Intention: A forecast regarding when, where, and how the buyer will act toward a brand in view of external (exogenous) inhibiting factors such as high price, lack of availability, social influences, and so on.
Confidence: Degree of certainty perceived toward a brand.
Satisfaction: Degree of congruence between actual and expected purchase consequences.

(3) Perceptual Constructs
Attention: Opening and closing of sensory receptors to control information intake.
Stimulus ambiguity: Perceived uncertainty and lack of meaningfulness of information received from the environment.
Perceptual bias: A distortion of information that is received.
Overt search: An active search for information.

This model has provided insight into the complex nature of consumer behavior. The numerous variables are organized into sets which are related in a process. Some of the variables of the interaction process are hard to define and measure but suggest a more comprehensive explanation of consumer behavior.

Conceptual Model

The conceptual model developed for this study is presented in Figure 6. The model reflects variables and processes adapted from previous research. The relationship of this model to previous work will be discussed in the next sections.
Figure 6. Conceptual model
Conceptual Framework of the Present Study

The model used in this study can be related to those cited previously. Lavidge and Steiner's (1961) model related to the functions of advertising and can be simplified into three behavioral components as follows:

awareness-knowledge (cognitive) → liking-preference (affective) → conviction-purchase (conative)

The present study uses these three behavioral components. However, when used to predict knowledge of credit regulations, the order is reversed. There is evidence in the literature to support this change. Aaker and Day (1974) found the flow went both directions. The dominant one supported the Lavidge and Steiner model, but they also found the reverse flow. Markin (1974) stated that the persistent view is that attitudes influence behavior but that mounting evidence challenges that position. He gave several examples of marketing practices based on the premise that behavior can and does lead to attitude change. The free samples and free home trials are attempts by marketers to use behavior to influence attitudes.

The model proposed in the present study can be condensed to the following steps:
Howard and Sheth's model (1973) of consumer behavior is much more complex. It included several variables not of interest to the present study and it was designed to explain a purchase decision which is not the intent of this study. However, the model can be simplified into the following process which is useful.

Inputs → Perceptual constructs and learning constructs → Outputs

Using this process and some of the same variables, Howard and Sheth's model can be adapted to provide the basic framework for the model proposed in this study. The adaptation is presented in Figure 7.

Healey's model (1974) of purchase behavior included several variables of interest to this study. One that was not a part of other studies is past usage of product class. Healey's model related past usage of product class to advertising awareness and purchase/current usage. Past credit experience as a variable in this present study may be similarly related to knowledge of credit regulations.
<table>
<thead>
<tr>
<th>Inputs</th>
<th>Perceptual Constructs</th>
<th>Learning Constructs</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>socioeconomic status</td>
<td>attitudes toward the need for credit regulations</td>
<td>knowledge of consumer credit regulations</td>
<td></td>
</tr>
<tr>
<td>age</td>
<td>credit experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7. Howard and Sheth's model adapted to the present study

The previous research gave insight into the possible explanation of differences in knowledge about consumer credit regulations. However, the research concentrated on Truth in Lending, the first of several consumer credit regulations. The results of the various studies on awareness of the Truth in Lending law and knowledge of credit costs under the provisions of the law were not consistent. There were some common threads. Mandell (1971, 1973), Shay and Schober (1973), Day and Brandt (1973, 1974), Deutscher (1973), Parker and Shay (1974), Turpin (1973) and Samuels (1976) found education and Mandell (1971, 1973), Shay and Schober (1973), Deutscher (1973), Cunningham and Cunningham (1976), Tootelian (1975) and Durkin (1975) found income related to awareness of credit costs or existence of credit laws. The present study on women's knowledge of credit regulations is a more comprehensive investigation of the major federal credit regulations. This study is based on a conceptual model with new intervening variables which are thought to mediate some of the demographic influences used in previous research.
Previous models cited did not use knowledge of credit regulations as a dependent variable. The model used in this study has knowledge as the dependent variable. The independent, intervening and dependent variables considered are given in Figure 8. General experience and general socioeconomic status

<table>
<thead>
<tr>
<th>Independent</th>
<th>Intervening</th>
<th>Dependent</th>
</tr>
</thead>
<tbody>
<tr>
<td>socioeconomic status</td>
<td>attitudes about the need for government regulations to solve credit problems</td>
<td>knowledge of consumer credit regulations</td>
</tr>
<tr>
<td>age</td>
<td>conservative/liberal orientation</td>
<td></td>
</tr>
<tr>
<td>marital status</td>
<td>credit experience</td>
<td></td>
</tr>
<tr>
<td>general experience</td>
<td>general fund</td>
<td>of knowledge</td>
</tr>
</tbody>
</table>

Figure 8. Variables considered for this study

fund of knowledge were not included in the research due to measurement difficulties. The variables selected for this study are presented in Figure 9 and are discussed in the following section.

Selection of Variables

Previous research has explored the role of demographic variables of family income, education, and type of occupation of the head of household
Independent | Intervening | Dependent
--- | --- | ---
socioeconomic status | attitudes about the need for government regulations to solve consumer credit problems | knowledge of consumer credit regulations
age | conservative/liberal orientation to public issues | credit experience
marital status

Figure 9. Variables selected for this study

and other variables not of concern to this study. However, the conclusions about the role of the demographic variables in predicting knowledge, attitudes and behavior were not consistent. None of the previous research looked specifically at the role of the socioeconomic status, age and the marital status of women. The power of these variables related to women is important to investigate because of the increasing number of working women and the role of women in managing family finances. Intervening variables were found to be more important than demographic variables in several of the previous studies but the results on those tested were not satisfactory. Based on this literature review, the variables selected for this study are defined and the relationships among them are hypothesized in the following section.
Independent variables

**Age** The age of the respondent is used as the definition of age in this study. This study is of women from 20 to 65 years of age in order to include participants with credit experience yet exclude those beyond 65 because of potential credit complications related to age and employment. The role of age is thought to influence intervening variables in different ways and thus should be indirectly related to credit knowledge. Younger persons may be expected to be more liberal in orientation, have a more positive attitude toward the need for credit regulations and thus to have more knowledge. However, age may also have the opposite effect on credit experience. It could be expected that an older person could have had more credit experience and thus more knowledge. This effect may decrease at the upper age levels when use of credit may be less.

**Marital status** Marital status is defined as whether or not a respondent is married and was not included as a variable in most of the reported research on credit knowledge. Marital status has been cited as a prime reason for women being denied credit, thus it will be included in the present study. Because unmarried women have had total responsibility for any credit transactions and also may have had credit problems due to marital status, the study will ascertain whether they have more knowledge of credit regulations than married women.

**Socioeconomic status** This variable is defined as the relative position of the family compared to others in the community based on
social and economic considerations such as income, occupation and formal education. A positive relationship to knowledge may be anticipated because those with a higher socioeconomic status usually are considered more credit worthy. This study will ascertain whether this greater opportunity for credit experience has a positive relationship with knowledge.

Intervening variables

Attitudes toward the need for government regulations to solve credit problems

This variable is defined as predispositions, feelings or views on whether or not there should be regulations designed to answer credit problems. There does not appear to be any previous research on supportive attitudes about the need for credit regulations or the effect of these attitudes on knowledge of the regulations. Positive attitudes about needing regulations to solve credit problems may be positively associated with knowledge of these regulations. This relationship will be tested.

Conservative/liberal orientation toward public issues

The respondent's personal evaluation of views on public issues is the definition of conservative/liberal orientation for this study. Unlike some research where it is not defined, this variable is qualified to public issues to provide better insight on the interpretation of conservative/liberal. Orientation to public issues can be described as a continuum ranging from very conservative to very liberal. Those who
tend toward the conservative end may be likely to be traditional in outlook and like to maintain the status quo. On the other end of the continuum, liberals are more likely to be open minded and promote changes. None of the previous research on credit knowledge included a variable on orientation to public issues. Previous work suggests that conservatives may be less likely to know credit regulations and that those with more of a liberal orientation will be more likely to support government regulations on credit and be more knowledgeable of the regulations. This study will ascertain whether or not those with a more liberal orientation will have greater knowledge of credit regulations.

**Credit experience**  This intervening variable is defined as the amount of exposure to credit through use of credit cards and cash loans, bill paying and actions related to credit regulations. The study will investigate whether or not more experience contributes to greater knowledge of credit regulations.

**Dependent variable**

**Knowledge of credit regulations**  Knowledge is defined as accurate information about federal credit regulations. If consumers are to be protected by legislation, they have to be aware that the regulations exist as well as know the provisions. Accurate information is critical for consumers to make wise credit choices. The factors
which contribute to consumers' knowledge of information required by credit regulations is of prime concern to educators. No previous study included knowledge of all of the major credit regulations or used a multiple choice test. A multiple choice test can avoid the shortcomings of the potential for guessing with true-false questions and the possibility of inaccurately measuring knowledge with awareness questions answered by a "yes." The present study using a multiple choice test is designed to assess women's knowledge level about major credit regulations and to ascertain the effects of the previously discussed independent and intervening variables.
METHOD OF PROCEDURE

This chapter will explain the operational definitions of the variables and the plan for testing the conceptual framework. Included will be the purpose and general hypotheses of the study, questionnaire development and data collection, data analysis plan and operational definitions of the variables in the model to be tested.

Purpose of the Study

The purpose of the study was to test the influence of selected socioeconomic and demographic variables, attitudes and credit experience on knowledge of consumer credit regulations.

General Hypotheses

The general hypotheses generated from the conceptual framework were:

1. There will be no significant relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, credit experience, conservative/liberal orientation to public issues and education.

2. There will be no significant relationship between credit experience and age, marital status and socioeconomic status.

3. There will be no significant relationship between conservative/liberal orientation to public issues and credit experience, age and education.

4. There will be no significant relationship between attitudes about the need for government regulations to solve credit problems and
conservative/liberal orientation to public issues, credit experience, age and marital status.

Scope and Limitations

Recent legislation has given women new credit rights. This study assessed how supportive women were of credit regulations and how effective the legislation has been in terms of women's awareness. The study was completed in Des Moines, the largest city in Iowa. A random sample of the population was drawn and women aged 20 to 65 were asked to complete the mailed questionnaire. Because a random sample was used, the findings can be generalized to women in the Des Moines area. Findings may be generalized to other areas to the extent that populations in other areas are similar.

A second sample was obtained by using the complete membership lists of two women's rights groups in the Des Moines area, the National Organization of Women and the Iowa Women's Political Caucus. Because the complete list or census of these groups was used, the findings can be generalized to other chapters of these and other women's rights organizations which have similar memberships.

Limitations of the study include the fact that the telephone directory was used as the sampling frame. Thus those households with no telephone and those with unlisted numbers had no chance of being drawn for the sample. The study is also limited by the usual assumptions of survey research based on a random sample of a population. It is assumed that respondents give honest and accurate responses when answering the questionnaire.
Development of the Questionnaire

A mailed questionnaire was the method chosen to collect the data because of the large sample size. Data can be collected with a mailed questionnaire from a large sample faster and more economically than in a personal interview and more questions can be asked than in a telephone interview.

Because there was not an appropriate instrument available that could be used or adapted, a new one was developed. The questionnaire was divided into four sections: attitudes, test of knowledge of credit regulations, credit experience and socioeconomic and demographic data. Each of the four sections will be described. Please refer to the questionnaire in Appendix A for the exact questions.

Attitudes

The first section of the questionnaire concerned attitudes about the need for government regulations to solve credit problems. The 22 questions related to attitudes were based on the provisions of the regulations already in existence, a fact not disclosed to the respondent in the questionnaire. For example, a question about the Fair Credit Reporting Act was: "I think it is important that there be a law or government regulation which allows me to find out the information in my credit file which is used as a basis for determining my credit rating." The respondent was asked to circle one of five responses which formed a Likert-type scale. The responses were strongly disagree, disagree,
undecided, agree and strongly agree. Questions were also based on provisions of the Truth in Lending Act, Equal Credit Opportunity Act and Federal Trade Commission regulations on a cooling off period for door to door sales.

Knowledge

The second section of the questionnaire was a test of knowledge of consumer credit regulations. Questions were limited to the major provisions of the regulations to avoid discouraging uninformed respondents. The number of questions was also limited to facilitate completing and returning the questionnaire. The first questions were on general credit knowledge, not regulations. This approach was used for two reasons: 1) to start the test with questions the respondents would more likely know the answers, and 2) to lengthen the test for improved reliability with questions on general credit information instead of specific regulations which would increase the difficulty. A multiple choice format was selected because multiple choice as compared to true-false items have a relatively small susceptibility to score variations due to guessing (Mehrens and Lehmann, 1973). These authors maintain that multiple choice items also provide greater test reliability, are easier to respond to and are freer from response sets than true-false items. Multiple choice items are more objective and easier to score than open ended questions.

For the knowledge test, there were four possible answers including an "I don't know" option to avoid forcing a choice of another option.
For example, a question on Truth in Lending was: "A federal law requires creditors to: (1) tell me what method they use to figure the interest rate, but does not require a standard method, (2) use the monthly percentage rate when quoting the interest rate, that is the interest rate based on one month, (3) use the annual percentage rate when quoting the interest rate, that is the interest rate based on one year, and (4) I don't know." Additional areas covered by the questions were the Fair Credit Reporting Act, Equal Credit Opportunity Act and Federal Trade Commission regulations on a cooling off period for door to door sales.

Credit experience

The third section of the questionnaire concerned credit experience of the respondent. Credit experience was defined as the dollar amount of the monthly payments for credit card purchases, number of credit cards held, frequency of use of credit cards in a month, dollar amount of the monthly payments for cash loans, number of cash loans in the last two years, bill paying experience and actions and problems related to credit regulations. Questions were developed to measure these aspects of credit experience.

Socioeconomic and demographic information

The final part of the questionnaire concerned socioeconomic and demographic information about the respondent such as age, marital status, income and education. Included in this section was a question used to
identify conservative/liberal orientation: "Circle the one answer that most closely describes your own views generally on public issues: (1) very conservative, (2) conservative, (3) moderate, (4) liberal and (5) very liberal."

A main concern of research based on mailed questionnaires is return rate. Although there is not agreement among researchers on the techniques that are most successful, particular techniques often improve the return rate (Cox et al., 1974, Kanuk and Berenson, 1975).

In an attempt to increase the return rate, the following were considered: ease of answering, length, order of questions, professional appearance, a personally signed cover letter, a reward for returning and ease of returning. Respondents had only to circle their answers, except for some of the questions on credit experience and occupation. The order of questions started with those easiest to answer. Because the questionnaire was 10 pages long, it was reduced in size by 25% to make it appear shorter and thus require less effort to complete. A cover letter was added to the beginning to explain the purpose, the intended respondents, how to return it and in addition, assured anonymity. A new Iowa State University publication "To Your Credit" was offered to encourage returning the questionnaires and to extend consumer information on credit rights. Each letter was personally signed by the researcher to add individuality. The questionnaire and cover letter were put together in book format. A cover page was added with a title, Consumer Credit Survey, and an
illustration to give a more professional appearance. An envelope requiring no postage and pre-addressed to the researcher was enclosed.

Testing the Questionnaire

To establish face validity, faculty members whose courses included consumer credit, research methods and evaluation and faculty members employed as area consumer-management specialists with the Cooperative Extension Service were asked to review the first draft of the questionnaire for correct content and clarity of questions and options. On the basis of their comments, the questionnaire was revised. Then it was pretested with 20 women in the Ames, Iowa area. For the pretest, names were obtained from community agencies to ensure that the women would represent different socioeconomic categories. Respondents' answers as well as comments about the questions were helpful in the final revision of the instrument.

Sampling Plan

Because there was no available census of Iowa women from which to draw a random sample, the sampling was based on census data and the telephone directory. Des Moines was selected because it is the largest city in Iowa and therefore has the most married and non-married women in the state. A sampling rate of 1 in 68 was used to yield 200 returns of the smaller group in the population, the non-married women.

A random sample was drawn in December, 1975 from the Des Moines area telephone directory published that month. A two stage random
sample was drawn from pages and then from listings on the selected pages. Because the mailing had to be addressed according to the telephone listing, the cover letter asked a woman aged 20 to 65 to complete the questionnaire. If there was no woman between 20 and 65 in the household, the recipient was asked to check a box indicating no woman in the household and return the cover letter.

In addition to the random sample, the study also surveyed the entire membership of two women's rights groups in the Des Moines area. Questionnaires were sent to every member of the Iowa Women's Political Caucus and the National Organization of Women. Those between 20 and 65 were asked to respond, as in the randomly drawn sample.

Data Collection

Because the researcher was a State Cooperative Extension Specialist and Extension letterhead was used for the cover letter with the questionnaire, Extension field staff were informed about the research and asked to be prepared in case of questions. Thus letters were sent to the Cooperative Extension staff in the Des Moines area during January, 1976. At the same time, a letter explaining the study and a copy of the questionnaire were sent to the Des Moines Chamber of Commerce, Iowa Credit Union League, Iowa Bankers Association, Superintendent of Banking and the Better Business Bureau. Copies of the letters are in Appendix B.

The questionnaires were mailed on February 1, 1976 to 1,318 names randomly drawn from the Des Moines area telephone directory. Also 441
questionnaires were sent to the memberships of the National Organization of Women and the Iowa Women's Political Caucus in the Des Moines area. A reminder postcard was sent to the entire sample a week later. Then on February 19, 1976, a follow up letter and another questionnaire and return envelope were sent to non-respondents. Copies of the follow up letter and post card are in Appendix B. A telephone call was made the second week in March to non-respondents in the randomly drawn sample whose telephone listing was a female name or only initials. Calls to 177 were attempted in the evenings because it was anticipated that more working women would be home at night. When a potential respondent was reached by telephone and she was willing to respond, another questionnaire and return envelope were sent to her.

Fifty (3.7%) questionnaires mailed to the randomly drawn sample were returned because of an incorrect address or the death of the addressee. For the two women's groups, 15 (3.4%) were returned for the same reasons. After all responses were received, a total of 305 (72%) questionnaires were returned by the women's group sample and 743 (59%) were returned by the randomly drawn sample. The response pattern per contact is presented in Table 2.

Of the 743 questionnaires returned from the randomly drawn sample, 528 (71%) were usable. Of the 305 from the women's rights groups, 284 (93%) were usable and included in the analysis. The majority of the unusable questionnaires occurred because the respondent did not fit the specification of being a woman between 20 and 65, as indicated by the demographic data on the questionnaire. A few questionnaires
Table 1. Response pattern of respondents by number and percent

<table>
<thead>
<tr>
<th>Contact</th>
<th>Randomly Drawn</th>
<th>Women's Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Initial mailing</td>
<td>276</td>
<td>37</td>
</tr>
<tr>
<td>Post card reminder</td>
<td>145</td>
<td>20</td>
</tr>
<tr>
<td>Letter reminder</td>
<td>268</td>
<td>36</td>
</tr>
<tr>
<td>Telephone contact</td>
<td>50</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>743</td>
<td>100</td>
</tr>
</tbody>
</table>

were not useable because of large amounts of missing data or because it appeared that the respondent had not answered honestly. Specialists in survey research were consulted to confirm decisions on questionnaires omitted.

During the time that the data were being collected, extension education programs and extension mass media releases on the topic of credit regulations were avoided. No known newspaper articles from other sources were printed at the time of data collection. Thus, there did not appear to be a widespread event to bias results.

Coding

The questionnaires were coded according to the plan given in Appendix C. Coding was done directly on the questionnaire as the responses were designed to be self coded, except for occupation and a few open ended questions on credit experience. All the questionnaires
were checked, the following were coded: missing data, open ended questions on credit experience and occupation. Missing data were usually assigned the next highest code. For example, missing data on a question with two categories coded 1 and 2, was coded a 3 and on a question with five categories coded 1, 2, 3, 4 and 5, was coded a 6.

For analysis purposes, missing data on some variables were assigned values. The mode was assigned to variables with categories as answers such as conservative/liberal orientation to public issues. A few variables used open ended questions with responses as continuous data. For example, the dollar monthly payment for credit card charges was answered in dollars. The mean was assigned for persons who did not give the monthly payment but answered the questions on number of credit cards and frequency of use. Missing information on payments was coded as missing data for respondents who did not use credit cards. The same procedure was used for missing data on cash loans.

Data Analysis Plan

Data analysis for this study was based on 528 respondents from the randomly drawn sample and 284 from the women's rights groups. After the data were coded and consistency checks made, frequencies were obtained for all items.

The Statistical Package for the Social Sciences (Nie et al., 1975) was used to analyze the data with multiple regression techniques. Kerlinger and Pedazur (1973) classify multiple regression as a method of analyzing the collective and separate contributions of two or more
independent variables. Path analysis, a form of multiple regression, measures the direct and indirect influences of each variable along each separate path in the system and assesses the degree to which variation of a given dependent variable is determined by each independent variable. Residual path coefficients reflect the sum of all the effects of variables omitted from the model plus random error of all the variables not in the model.

Kerlinger and Pedazur (1973) discuss the assumptions of path analysis which include: (1) the relations among the variables in the model are linear, additive and causal; (2) the residuals are not correlated among themselves, nor are they correlated with the variables in the system; (3) there is a one way causal flow in the system and (4) the variables are measured on interval scales.

The arrows in the conceptual model (Figure 1) can be converted to a system of path analysis equations that reflect the linkages drawn. According to Asher (1976), four kinds of terms are included: X is an exogenous variable because it is not influenced by other variables in the model; Y and Z are endogenous variables because they are affected by other variables in the model; e is the residual or error term that represents those factors not actually measured that impinge on endogenous variables; and Ps are the unknown weights or path coefficients which represent the impact of one variable on another. One structural equation can be written for each endogenous variable. For example, the general formula for predicting knowledge of credit regulations is:
knowledge = attitudes + conservative/liberal + credit + education + residential orientation + experience + + ual

\[ Z = pY_1 + pY_2 + pY_3 + pX_1 + e \]

Where:

- \( p \) is the path coefficient for the individual variable and hence is different for each variable
- \( e \) is the error term or residual

Operational Definitions of the Variables

This section presents the operational definitions of the variables used in this study.

**Independent Variables**

Categories were used as answers to the questions designed to collect most of the data for independent variables. Thus a respondent was able to quickly circle answers.

**Age** The respondent's age was measured by a variable that indicated her age in years. Nine categories were used. Each category included a five year span, and ranged from 20 to 24 years to 60 to 64 years.

**Marital status** Five categories of marital status were given: (1) married, (2) separated, (3) single, (4) widowed and (5) divorced. The number of respondents in some of the non-married categories was not sufficient for the planned statistical analysis using each as a separate group. Therefore, the non-married categories were combined, resulting in a dichotomous variable: married and not married.
Education The measure of education used for this study was the highest grade completed by the respondent. Nine categories were used: (1) elementary school, (2) some high school, (3) high school graduate, (4) business, vocational or technical training after completion of high school, (5) some college, (6) college graduate, (7) post graduate courses, (8) advanced degree(s) and (9) other: __________.

Socioeconomic status The measure of socioeconomic status utilized in this study was the total family income calculated by combining two questions, one that asked for the income of the respondent and one that asked for her husband's income. For this study it was decided that total family income, rather than just the income of the respondent would be most appropriate. Thus for the regression analysis, the midpoints of the income categories were added together to yield a single variable to represent family income. Credit availability for a married woman has traditionally been based on husband's income or family income instead of the wife's income. Thus family income provides the opportunity for extension of credit and therefore credit experience. The socioeconomic status and credit experience variables reflect family experience. Ten income categories were used. Except for the minimum category of no income and the maximum category of "$24,000 and over," the remaining income categories were in $3,000 increments and ranged from "less than $3,000" to "$21,000 to $23,999." Occupation was not used as a measure of socioeconomic status. The answers to the question "What is
your occupation?" were coded according to the Directory of Occupational Titles system. For details of this coding system, please see Appendix C. However, the Dictionary of Occupational Titles coding is not an interval scale and therefore could not be used in regression analysis.

Education was not selected as the measure of socioeconomic status for this study. Because women's knowledge of credit regulations was the dependent variable, education of the woman respondent was an independent variable as described above. For married women, husband's education is more often the measure of the family's socioeconomic status, but husband's education was not asked in this survey.

Intervening variables

Attitudes about the need for government regulations to solve credit problems. Twenty-two items, coded on a five point scale, were used to measure attitudes about the need for government regulations to solve credit problems. The Likert-type scale permitted the summation of the answers yielding a total score for each respondent. The responses to the 22 questions were highly correlated. Thus the questions were assumed to measure the same underlying dimension and could be added to form a scale.

The SPSS subprogram Reliability (Specht, 1975) was used. Specht (1975, p. 16) defines reliability:

In general, the concept of reliability refers to how accurate, on the average, the estimate of the true score is in a population of objects to be measured.
A reliability coefficient of 0 occurs when the ratio of the variance of the errors of measurement to the variance of the observed scores is 1. When this same ratio is 0, the reliability coefficient is 1. For example, a reliability coefficient of .90 indicates that 90% of the variation of the observed scores is due to the true measure and 10% of the variation is due to measurement error. Cronbach's alpha and the standardized item alpha were used in this study. Similar magnitude of both alphas is desirable. The standardized item alpha is calculated by dividing the score on each item by the standard deviation of that item.

Reliability analysis indicated that the attitudes scale had an alpha of .925 (.933 for the standardized item alpha), an extremely high reliability coefficient. Thus a single number, the sum of the 22 attitude answers could be used in the analysis to indicate the respondent's attitudes.

**Conservative/liberal orientation toward public issues** The measure of the respondent's conservative/liberal orientation toward public issues was obtained from the question: "Circle the one answer that most closely describes your own views generally on public issues. (1) very conservative, (2) conservative, (3) moderate, (4) liberal and (5) very liberal."

**Credit experience** Four dimensions of credit experience were measured: use of credit cards, use of cash loans, paying bills and actions and problems related to consumer credit regulations. Each dimension was considered separately and then a composite was obtained.
Because credit experience was measured through a variety of questions on different dimensions, standardization was used to permit the combination into a single measure for analysis.

The formula used to standardize (Kerlinger and Pedhazur, 1973) is:

$$Z_x = \frac{X - \overline{X}}{s_X} = \frac{X}{s_X}$$

where $Z_x$ = the standard score, $X$ = a raw score, $\overline{X}$ = mean of $X$ scores, $s_X$ = standard deviation of the set of $X$ scores and $x = X - \overline{X}$ (deviation scores). Converting the responses on different types of credit experience into $Z$ scores permitted the combination of unlike measures into a single measure of credit experience. Each of the four dimensions of credit experience was standardized.

Credit card experience was measured by questions that asked for the number of different types of credit cards held by family members, the number of times a month the cards were used by the respondent and the dollar monthly payment made by the family for all credit card charges. The number of credit cards reported was summed and standardized. The frequency of use of credit cards was summed and standardized. The total monthly payments for credit card charges was standardized. These three standardized components were summed for the total of credit cards and then the sum was standardized.

Cash loan experience was measured by the questions asking for the number of times in the last two years that respondents or others in the family had borrowed from eight sources of credit and the dollar monthly payment made by the family for repaying cash loans. The number
of loans was summed and standardized. The monthly payments for loans were standardized. Total loan experience was the sum of both of these standardized components and then it was standardized.

Credit experience through paying bills was measured by the question asking how often the respondent paid the bills for credit charges and cash loans. The answer to this question was standardized for the third component of credit experience.

The final component of credit experience was action and problems related to credit regulations. The questions used to measure this fourth component asked if the respondent had checked her credit file in the last five years, canceled a credit contract from a door to door salesperson, had credit cards lost or stolen and had been personally turned down for credit in the last five years. The "yes" responses were added and then standardized.

These four standardized components were summed to yield the composite variable, credit experience. Equal weight was given to each component because previous research had not established the importance of the individual components so there was no theoretical basis for unequal weighting.

The four dimensions of credit experience had not been tested in previous research, thus they were validated through factor analysis. The results of factor analysis clearly established credit cards and cash loans as two unique factors. The third dimension, paying credit bills, was also singled out as a factor as it did not load uniquely. The fourth factor, actions and problems related to credit regulations,
was established by eliminating four questions which did not contribute to the factor and were not evidence of personal experience. The results of factor analysis indicated the remaining four items could be used as the final factor of credit experience. Thus factor analysis results supported the four dimensions of credit experience selected. The composite or standardized value of these four dimensions was used for the analysis.

**Dependent variable**

*Knowledge of credit regulations* Responses to the 14 item multiple choice test were used to measure knowledge of credit regulations. A summed scale was constructed to yield one variable for these questions by adding all the correct answers. A wrong answer or a "don't know" did not count.

As described for the attitude scale, the SPSS subprogram Reliability was used. Reliability analysis of the 14 items yielded an alpha of .678 (.667 for standardized item alpha). Six questions were eliminated which did not contribute to the scale based on the fact that their elimination improved the alpha to .698 (.698 for standardized item alpha). The questions eliminated were on general credit knowledge (questions 22 through 26) and two items (29 and 30) on credit bureaus and on canceling contracts from door to door salespersons. The summed score on the eight item test constituted the dependent variable.

**Model to be Tested**

Figure 10 presents the model tested in the analysis. It is the conceptual model (Figure 6) presented in Chapter II operationally defined.
INDEPENDENT

- Family income
- Her formal education
- Her age
- Marital status

INTERVENING

- Attitudes about the need for government regulations to solve credit problems
- Conservative/liberal orientation to public issues
- Knowledge of consumer credit regulations

DEPENDENT

- Credit experience: credit card use, cash loan use, bill paying actions and problems related to credit regulations

Figure 10. Model to be tested
Specific Hypotheses to be Tested

The general hypotheses were refined based on the operational definitions of the variables. The specific hypotheses to be tested were:

(1) There will be no significant relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, conservative/liberal orientation to public issues, credit experience and formal education.

(2) There will be no significant relationship between credit experience and marital status, age and family income.

(3) There will be no significant relationship between conservative/liberal orientation to public issues and credit experience, age and formal education.

(4) There will be no significant relationship between attitudes, the need for government regulations to solve credit problems and conservative/liberal orientation to public issues, credit experience, age and marital status.
ANALYSIS AND FINDINGS

The findings and discussion regarding the hypothesized influences on knowledge of credit regulations are presented in this chapter. Because the study utilized two different samples, parallel but separate analyses were performed, one for the probability sample of the Des Moines area and one for the sample of the women's rights groups. This chapter is divided into two main sections. First, the characteristics of both groups are presented and discussed. Included are age, income, education, marital status, credit experience, conservative/liberal orientation, attitudes about and knowledge of credit regulations. Finally the model presented in Figure 6 is tested for each sample.

Describing the Sample: Income, Age, Marital Status and Education

The frequency distributions of the respondents' income for the two samples are presented in Table 2. The median income for the women's rights sample was $8,490, much higher than the median of $5,910 for the randomly drawn sample. Over 50% of the randomly drawn sample compared to 33% of the women's rights sample had reported incomes of less than $6,000. Because more of the randomly drawn sample were married (Table 4), the lower income for this group probably reflects less need to be earning.

The differences in reported incomes of husbands of the respondents are given in Table 3. About 45% of the women's rights sample reported no husband's income compared to 28% of the randomly drawn sample. Thus the mean and median for husband's income were higher for the randomly
Table 2. Percentage distribution of respondents' income

<table>
<thead>
<tr>
<th>Income Class</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>17.2</td>
<td>10.2</td>
</tr>
<tr>
<td>less than $3,000</td>
<td>17.0</td>
<td>12.7</td>
</tr>
<tr>
<td>$3,000 to $5,000</td>
<td>16.3</td>
<td>10.6</td>
</tr>
<tr>
<td>$6,000 to $8,999</td>
<td>28.0</td>
<td>20.1</td>
</tr>
<tr>
<td>$9,000 to $11,999</td>
<td>11.4</td>
<td>17.6</td>
</tr>
<tr>
<td>$12,000 to $14,999</td>
<td>5.1</td>
<td>16.9</td>
</tr>
<tr>
<td>$15,000 to $17,999</td>
<td>3.0</td>
<td>6.7</td>
</tr>
<tr>
<td>$18,000 to $20,999</td>
<td>0.6</td>
<td>3.2</td>
</tr>
<tr>
<td>$21,000 to $23,999</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>$24,000 and over</td>
<td>0.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
<tr>
<td>Mean</td>
<td>$5,640</td>
<td>$8,400</td>
</tr>
<tr>
<td>Median</td>
<td>$5,910</td>
<td>$8,490</td>
</tr>
</tbody>
</table>

drawn sample. However, less than 10% of the randomly drawn sample as compared to over 15% of the women's rights sample reported $24,000 and over for husband's income. The difference in husband's income reflects the difference in marital status between the two samples (Table 4),
Table 3. Percentage distribution of income of respondents' husbands

<table>
<thead>
<tr>
<th>Income Class</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>27.7</td>
<td>44.7</td>
</tr>
<tr>
<td>less than $ 3,000</td>
<td>1.1</td>
<td>0.7</td>
</tr>
<tr>
<td>$ 3,000 to $ 5,999</td>
<td>2.8</td>
<td>1.8</td>
</tr>
<tr>
<td>$ 6,000 to $ 8,999</td>
<td>4.7</td>
<td>2.8</td>
</tr>
<tr>
<td>$ 9,000 to $11,999</td>
<td>9.7</td>
<td>7.0</td>
</tr>
<tr>
<td>$12,000 to $14,999</td>
<td>18.8</td>
<td>10.2</td>
</tr>
<tr>
<td>$15,000 to $17,999</td>
<td>12.7</td>
<td>7.4</td>
</tr>
<tr>
<td>$18,000 to $20,999</td>
<td>7.8</td>
<td>7.4</td>
</tr>
<tr>
<td>$21,000 to $23,999</td>
<td>5.1</td>
<td>2.8</td>
</tr>
<tr>
<td>$24,000 and over</td>
<td>9.7</td>
<td>15.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
<tr>
<td>Mean</td>
<td>$10,860</td>
<td>$8,910</td>
</tr>
<tr>
<td>Median</td>
<td>$12,630</td>
<td>$9,000</td>
</tr>
</tbody>
</table>

44% of the women's rights sample were not married and thus did not report income for a husband.

As expected there were similar differences in the educational levels between the two samples (Table 5). For example, over 65% of the women's
Table 4. Percentage distribution of respondents on marital status

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>not married</td>
<td>26.3</td>
<td>44.4</td>
</tr>
<tr>
<td>married</td>
<td>73.7</td>
<td>55.6</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
</tbody>
</table>

Table 5. Percentage distribution of respondents on formal education

<table>
<thead>
<tr>
<th>Formal Education Class</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>elementary school</td>
<td>0.9</td>
<td>0</td>
</tr>
<tr>
<td>some high school</td>
<td>6.6</td>
<td>0.4</td>
</tr>
<tr>
<td>high school graduate</td>
<td>37.7</td>
<td>5.3</td>
</tr>
<tr>
<td>business, vocational or technical school after high school</td>
<td>15.0</td>
<td>3.5</td>
</tr>
<tr>
<td>some college</td>
<td>19.3</td>
<td>24.6</td>
</tr>
<tr>
<td>college graduate</td>
<td>10.8</td>
<td>21.8</td>
</tr>
<tr>
<td>post graduate courses</td>
<td>4.9</td>
<td>23.2</td>
</tr>
<tr>
<td>advanced degree(s)</td>
<td>4.5</td>
<td>20.8</td>
</tr>
<tr>
<td>other</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>no answer</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
</tbody>
</table>
rights sample had obtained a college degree and more advanced education compared to 20% of the randomly drawn sample.

The frequency distributions of the respondent's age are given in Table 6. As a group, respondents in the women's rights organizations were younger with a mean of 37 years compared to 40 years for the respondents in the randomly drawn sample.

Table 6. Percentage distribution of respondents' age

<table>
<thead>
<tr>
<th>Age</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-24 years</td>
<td>14.2</td>
<td>10.9</td>
</tr>
<tr>
<td>25-29</td>
<td>16.3</td>
<td>23.6</td>
</tr>
<tr>
<td>30-34</td>
<td>13.8</td>
<td>16.2</td>
</tr>
<tr>
<td>35-39</td>
<td>10.2</td>
<td>13.4</td>
</tr>
<tr>
<td>40-44</td>
<td>9.8</td>
<td>10.2</td>
</tr>
<tr>
<td>45-49</td>
<td>10.0</td>
<td>8.5</td>
</tr>
<tr>
<td>50-54</td>
<td>7.4</td>
<td>5.6</td>
</tr>
<tr>
<td>55-59</td>
<td>8.3</td>
<td>7.7</td>
</tr>
<tr>
<td>60-64</td>
<td>8.3</td>
<td>3.5</td>
</tr>
<tr>
<td>no answer</td>
<td>1.5</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Total 100.0 100.0
N 528 284
Mean 40 37
Median 37 35
Mode 28 28
Thus the two groups differed on independent variables. The respondents in the women's rights groups were more likely to be younger, not married and have more education than those in the randomly drawn sample. The mean and median personal income of the respondents was much higher for the women's rights sample. However husband's income was lower for this group because 44% were not married and thus did not have husband's income to report.

Describing the Sample: Attitudes, Orientation and Credit Experience

As described in the previous chapter, a total attitude score was obtained for each respondent by summing the responses to the 22 attitude questions. The distributions of the total attitude scores for the two samples (Table 7) indicated that the respondents in the women's rights groups were more supportive of the need for consumer credit regulations than the women in the randomly drawn sample. Both groups agreed with the need for regulations, however; the highest score possible was 110, the mode for both samples.

Table 7. Distribution of respondents on total attitude scores

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>97.049</td>
<td>103.154</td>
</tr>
<tr>
<td>Median</td>
<td>99.591</td>
<td>104.971</td>
</tr>
<tr>
<td>Mode</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Range</td>
<td>22-110</td>
<td>22-110</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>260</td>
</tr>
</tbody>
</table>
As described in the previous chapter, respondents were asked to rate their own views of public issues from very conservative to very liberal. As a group, respondents in the women's rights organizations saw themselves as far more liberal than those in the randomly drawn sample (Table 8). Over 70% of the respondents in the women's rights organizations rated themselves as liberal or very liberal. Over 80% of the randomly drawn sample respondents classified themselves as conservative or moderate. Given the nature of the women's rights organizations, these findings were expected.

Table 8. Percentage distribution of respondents' conservative/liberal orientation

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>very conservative</td>
<td>2.7</td>
<td>0.7</td>
</tr>
<tr>
<td>conservative</td>
<td>19.7</td>
<td>4.6</td>
</tr>
<tr>
<td>moderate</td>
<td>58.7</td>
<td>21.5</td>
</tr>
<tr>
<td>liberal</td>
<td>14.4</td>
<td>52.5</td>
</tr>
<tr>
<td>very liberal</td>
<td>2.5</td>
<td>19.7</td>
</tr>
<tr>
<td>no answer</td>
<td>2.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
</tbody>
</table>

The distribution of respondents on the three elements of credit card use is presented in Table 9. The respondents in the women's
Table 9. Distribution of respondents on credit card use

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Number of Credit Cards</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>5.28</td>
<td>7.02</td>
</tr>
<tr>
<td>Mode</td>
<td>0.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Median</td>
<td>4.56</td>
<td>6.21</td>
</tr>
<tr>
<td><strong>Number of Times Per Month Credit Cards Used</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>3.83</td>
<td>6.00</td>
</tr>
<tr>
<td>Mode</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Median</td>
<td>2.25</td>
<td>5.20</td>
</tr>
<tr>
<td><strong>Dollar Monthly Payments on Credit Cards Used</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>$70.84</td>
<td>$120.85</td>
</tr>
<tr>
<td>Mode</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Median</td>
<td>39.93</td>
<td>70.25</td>
</tr>
</tbody>
</table>

rights organizations had more credit cards and used them more frequently during the month than the women in the randomly drawn sample. This group also paid higher monthly credit card payments than did those in the randomly drawn sample. Both the mean and median number of credit cards were higher for the women's rights groups. The modal respondent
in the women's rights sample had five credit cards a month, while the modal respondent in the randomly drawn sample had none. The median number of times credit cards were used per month for the women's rights sample was about twice the number for those in the randomly drawn sample. As expected with a greater number of cards and more frequent use, the women's rights sample had a much higher dollar monthly payment than those in the randomly drawn sample.

The distribution of the two samples on the two dimensions of cash loan use (Table 10) indicates few differences between the groups in the number of loans in the last two years. Respondents in both

Table 10. Distribution of respondents on cash loan use

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Loans in</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Last Two Years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>1.33</td>
<td>1.44</td>
</tr>
<tr>
<td>Median</td>
<td>0.74</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Dollar Monthly Payments for Loans</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>$76.16</td>
<td>$81.37</td>
</tr>
<tr>
<td>Median</td>
<td>$112.80</td>
<td>$144.53</td>
</tr>
</tbody>
</table>

groups averaged about one loan in the last two years. The distribution of the dollar monthly payment was similar for both groups. Since many
respondents did not have any loans, the median for both groups is low and almost identical. Cash loans were used less than credit cards (Table 9).

The frequency with which respondents paid credit bills is presented in Table 11. There did not appear to be much difference in the frequency of paying credit bills between the two samples. Almost half of

Table 11. Percentage distribution of respondents on frequency of paying family credit bills

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Never</td>
<td>6.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Seldom</td>
<td>6.6</td>
<td>7.7</td>
</tr>
<tr>
<td>Usually</td>
<td>7.0</td>
<td>11.3</td>
</tr>
<tr>
<td>Always</td>
<td>48.1</td>
<td>44.7</td>
</tr>
<tr>
<td>No answer</td>
<td>32.0</td>
<td>32.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
</tbody>
</table>

both groups always paid the family's credit bills. This finding is interesting in light of the finding on marital status (Table 4).
Although almost twice as many women from the women's rights sample as from the randomly drawn sample were not married, there is little difference among the two groups on the percentage paying all the bills. Hence a high proportion of married women are the family bill payer.

The percentage distributions of the two groups on the last component of credit experience, actions and problems related to credit regulations are presented in Table 12. On all four of the questions, the respondents in the women's rights organizations had exercised their rights more and were turned down for credit more than those in the randomly drawn sample. This finding is not surprising in light of the difference between the two groups on marital status.

The problem most frequently encountered by both groups was being turned down for credit in the last five years. The percentage of the women's rights sample reported being denied credit was almost twice the percentage of the randomly drawn sample. The women's rights group had a higher income and educational level but were less likely to be married compared to those in the randomly drawn sample. Income is an important factor in ability to repay credit and therefore is a basis for determining whether or not to extend credit. Thus it is interesting that 31% of the women's rights sample reported being turned down for credit.

Table 13 presents the distribution of the four questions given in Table 12 combined into one scale for this final aspect of credit experience. Both the mean and median indicate that the women's rights sample experienced at least twice as many actions and problems related to credit
Table 12. Percentage distribution of actions and problems related to regulations

<table>
<thead>
<tr>
<th>Action</th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>checked on credit file</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9.7</td>
<td>13.4</td>
</tr>
<tr>
<td>No</td>
<td>89.5</td>
<td>86.2</td>
</tr>
<tr>
<td>No answer</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>524</td>
<td>283</td>
</tr>
<tr>
<td>cancelled a contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7.8</td>
<td>9.2</td>
</tr>
<tr>
<td>No</td>
<td>90.7</td>
<td>90.1</td>
</tr>
<tr>
<td>No answer</td>
<td>1.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>520</td>
<td>282</td>
</tr>
<tr>
<td>lost credit cards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9.7</td>
<td>21.8</td>
</tr>
<tr>
<td>No</td>
<td>88.4</td>
<td>78.2</td>
</tr>
<tr>
<td>No answer</td>
<td>1.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>518</td>
<td>284</td>
</tr>
<tr>
<td>turned down for credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16.3</td>
<td>31.0</td>
</tr>
<tr>
<td>No</td>
<td>82.6</td>
<td>69.0</td>
</tr>
<tr>
<td>No answer</td>
<td>1.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>522</td>
<td>284</td>
</tr>
</tbody>
</table>
Table 13. Percentage distribution of total actions and problems related to credit regulations

<table>
<thead>
<tr>
<th>Total Number of Actions and Problems</th>
<th>Randomly Drawn Sample %</th>
<th>Women’s Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>91</td>
<td>82</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>528</td>
<td>284</td>
</tr>
<tr>
<td>Mean</td>
<td>.09</td>
<td>.24</td>
</tr>
<tr>
<td>Mode</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Median</td>
<td>.04</td>
<td>.11</td>
</tr>
</tbody>
</table>

regulations, probably the result of the fact that a far higher percentage of that group is not married.

Describing the Sample: Knowledge of Credit Regulations

The percentage distribution of respondents in both samples on the total scores on the test of knowledge of credit regulations is presented in Table 14. Eight was the perfect score. The respondents in the women's rights organizations had a higher knowledge score for credit regulations than the women in the randomly drawn sample. However, the
Table 14. Percentage distribution of respondents on total test scores

<table>
<thead>
<tr>
<th>Test Score</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Rights Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (lowest)</td>
<td>20.1</td>
<td>10.9</td>
</tr>
<tr>
<td>1</td>
<td>16.3</td>
<td>10.9</td>
</tr>
<tr>
<td>2</td>
<td>17.6</td>
<td>16.5</td>
</tr>
<tr>
<td>3</td>
<td>16.1</td>
<td>18.3</td>
</tr>
<tr>
<td>4</td>
<td>12.9</td>
<td>13.0</td>
</tr>
<tr>
<td>5</td>
<td>6.4</td>
<td>15.5</td>
</tr>
<tr>
<td>6</td>
<td>4.9</td>
<td>8.5</td>
</tr>
<tr>
<td>7</td>
<td>4.4</td>
<td>4.2</td>
</tr>
<tr>
<td>8 (highest)</td>
<td>1.3</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Total 100.0 | 100.0

N 528 | 284

Mean 2.54 | 3.26
Mode 0.0  | 3.0
Median 2.27 | 3.14

distribution indicated that the knowledge level in both groups was fairly low, with a median of 2.27 for the randomly drawn sample and 3.14 for the women's rights sample.
The percentage distribution of correct answers on the test items is presented in Table 15. The question that received the most correct responses by both groups was on sex discrimination in obtaining credit (question 8). The question that received the lowest number of correct answers by both groups was on adding one's side to a disputed incident in a credit file (question 2). Knowledge about Truth in Lending, the oldest of the regulations about which questions were included, was relatively high. More than half of the women's rights group and 41.3% of the randomly drawn sample selected the correct response on requiring creditors to disclose the total cost of credit in writing (question 3). However, the question about requiring the annual percentage rate for quoting interest (question 6) was correctly answered by 29.9% of the randomly drawn sample and 26.1% of the women's rights sample.

It is interesting to note that both groups scored relatively well on the last two questions related to the most recent legislation, the Equal Credit Opportunity Act. The high scores could be the result from increased awareness because of the publicity surrounding the law barring credit discrimination on the basis of sex and marital status. The law took effect a few months before the survey was conducted. Or the correct answers may reflect the respondents' feelings that "there must be a law" to prevent such discrimination and not actual knowledge of such a regulation.

Thus the frequency distributions provide some insight into the differences in the intervening and dependent variables between the two samples. As a group those in the women's rights sample had greater
Table 15. Percentage distribution of correct answers on test items

<table>
<thead>
<tr>
<th>Question and Correct Answer</th>
<th>Randomly Drawn Sample %</th>
<th>Women's Groups Sample %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a federal law which allows me to: find out what information is in my credit file</td>
<td>32.2</td>
<td>53.5</td>
</tr>
<tr>
<td>that could be used to determine my credit rating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. There is a federal law on credit ratings which allows me to: add my side of the story</td>
<td>12.9</td>
<td>22.9</td>
</tr>
<tr>
<td>when I do not agree with a creditor's report on my payment record</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. There is a federal law on credit which: requires credit granters to state in writing</td>
<td>41.3</td>
<td>50.4</td>
</tr>
<tr>
<td>the total cost of credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. A federal government regulation: limits to $50.00 the amount of bills I have to pay if</td>
<td>24.1</td>
<td>37.0</td>
</tr>
<tr>
<td>someone else uses my lost or stolen credit cards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. According to a federal regulation, companies which issue credit cards: can send them</td>
<td>25.9</td>
<td>26.1</td>
</tr>
<tr>
<td>only when I request them</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. A federal law requires creditors to: use the annual percentage rate when quoting the</td>
<td>29.9</td>
<td>26.8</td>
</tr>
<tr>
<td>interest rate, that is the interest rate based on one year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. A federal regulation: requires creditors not to treat persons applying for credit any</td>
<td>34.3</td>
<td>44.0</td>
</tr>
<tr>
<td>differently due to their marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. According to a federal government regulation: creditors can not use a person's sex as</td>
<td>53.6</td>
<td>65.1</td>
</tr>
<tr>
<td>the reason to deny credit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N 528 284
knowledge of consumer credit regulations. The women's rights sample also had more positive attitudes toward the need for government regulations to solve credit problems. However, both groups were very supportive of such regulations. Those in the randomly drawn sample were more likely to be moderate to conservative on public issues while those in the women's rights sample were more likely to be liberal. The women's rights sample also had more credit experience than those in the randomly drawn sample.

The greater knowledge of credit regulations for the women's rights sample may be related to the fact that this group had more credit experience and more formal education than the randomly drawn sample. The fact that the women's rights sample rated themselves as more liberal on public issues could explain their greater support for government regulations than the more moderate and conservative randomly drawn sample. The women's rights sample also had more credit experience. This could be related to the fact that more were unmarried and also had greater personal income than the randomly drawn sample.

The frequency distributions describe the differences in the two samples. However, it is necessary to use additional analysis to test the relationships proposed in the model.

Zero Order Correlations

The zero order correlations are presented in Table 16 for the randomly drawn sample and Table 17 for the women's rights organizations sample.
Table 16. Zero order correlations for the randomly drawn sample

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Income</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Education</td>
<td>0.164***</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3. Age</td>
<td>0.085*</td>
<td>-0.206***</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Marital Status</td>
<td>0.619***</td>
<td>-0.056</td>
<td>0.010</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. Attitudes</td>
<td>-0.075*</td>
<td>-0.080*</td>
<td>-0.060</td>
<td>-0.033</td>
<td>--</td>
</tr>
<tr>
<td>6. Orientation</td>
<td>-0.046</td>
<td>0.098**</td>
<td>-0.211***</td>
<td>-0.029</td>
<td>0.188***</td>
</tr>
<tr>
<td>7. Total Credit Exp.</td>
<td>0.213***</td>
<td>0.054</td>
<td>-0.147***</td>
<td>0.073*</td>
<td>-0.012</td>
</tr>
<tr>
<td>8. Credit Card</td>
<td>0.385***</td>
<td>0.137***</td>
<td>0.148***</td>
<td>0.275***</td>
<td>-0.039</td>
</tr>
<tr>
<td>9. Cash Loan</td>
<td>0.188***</td>
<td>0.026</td>
<td>-0.164***</td>
<td>0.134***</td>
<td>-0.030</td>
</tr>
<tr>
<td>10. Bill Paying</td>
<td>-0.044</td>
<td>-0.088*</td>
<td>-0.080*</td>
<td>-0.173***</td>
<td>0.015</td>
</tr>
<tr>
<td>11. Actions &amp; Problems</td>
<td>-0.010</td>
<td>0.072*</td>
<td>-0.243***</td>
<td>-0.037</td>
<td>0.025</td>
</tr>
<tr>
<td>12. Knowledge</td>
<td>0.187***</td>
<td>0.155**</td>
<td>-0.044</td>
<td>0.113**</td>
<td>-0.059</td>
</tr>
</tbody>
</table>

* Significant at the .05 level.
** Significant at the .01 level.
*** Significant at the .001 level.
<table>
<thead>
<tr>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
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</tr>
<tr>
<td>.029</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<td>--</td>
</tr>
<tr>
<td>-.085*</td>
<td>.473***</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>.007</td>
<td>.683***</td>
<td>.156***</td>
<td>--</td>
<td>--</td>
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<td>--</td>
</tr>
<tr>
<td>.092*</td>
<td>.674***</td>
<td>.055</td>
<td>.287***</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>.043</td>
<td>.489***</td>
<td>-.050</td>
<td>.105**</td>
<td>.145***</td>
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<td>--</td>
</tr>
<tr>
<td>.033</td>
<td>.182***</td>
<td>.246***</td>
<td>.070</td>
<td>.040</td>
<td>.086*</td>
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</tr>
</tbody>
</table>
Table 17. Zero order correlations for the women's rights sample

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Income</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Education</td>
<td>.072</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3. Age</td>
<td>.352***</td>
<td>-.006</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Marital Status</td>
<td>.722***</td>
<td>-.042</td>
<td>.174**</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. Attitudes</td>
<td>-.033</td>
<td>.108*</td>
<td>-.030</td>
<td>.023</td>
<td>--</td>
</tr>
<tr>
<td>6. Orientation</td>
<td>-.214***</td>
<td>.282***</td>
<td>-.167**</td>
<td>-.165**</td>
<td>.216***</td>
</tr>
<tr>
<td>7. Total Credit Exp.</td>
<td>.248***</td>
<td>.052</td>
<td>.007</td>
<td>.146**</td>
<td>-.030</td>
</tr>
<tr>
<td>8. Credit Card Use</td>
<td>.450***</td>
<td>.142**</td>
<td>.199***</td>
<td>.306***</td>
<td>-.020</td>
</tr>
<tr>
<td>9. Cash Loan Use</td>
<td>.129**</td>
<td>-.030</td>
<td>-.064</td>
<td>-.190***</td>
<td>-.020</td>
</tr>
<tr>
<td>10. Bill Paying</td>
<td>.051</td>
<td>.048</td>
<td>.037</td>
<td>-.092</td>
<td>.026</td>
</tr>
<tr>
<td>11. Actions &amp; Problems</td>
<td>-.092</td>
<td>-.035</td>
<td>-.146**</td>
<td>-.129*</td>
<td>-.037</td>
</tr>
<tr>
<td>12. Knowledge</td>
<td>.032</td>
<td>.069</td>
<td>-.139**</td>
<td>-.054</td>
<td>.004</td>
</tr>
</tbody>
</table>

* Significant at the .05 level.

** Significant at the .01 level.

*** Significant at the .001 level.
As expected, education, marital status, total credit experience, credit card use and cash loan use had positive correlations with income (Table 15). These correlations were significant at the .001 level. The positive relationships between income and total credit experience, credit card use and cash loan use were anticipated because greater income usually allows for greater credit capacity and credit extensions by creditors. The other two components of credit experience, bill paying and actions and problems related to regulations, were not significantly correlated with income and logically are not necessarily associated with amount of income.

The correlations between income, education and age were low. Thus the variables are independent and can be used as such in the regression analysis. The .619 correlation of income and marital status indicated a possible interaction which would not allow using both as independent variables in the regression analysis. Slope dummies were used to test for the possible interaction between income and marital status. Because the $R^2$ did not increase in this analysis, interaction was not thought to be present. Therefore, although there was a correlation but no interaction, both income and marital status could be used as independent variables in the regression analysis.

Total credit experience had a strong positive correlation with all four of its components, significant at the .001 level. This finding is to be expected because the components are different dimensions of credit experience and were used in constructing the final scale. Family income and knowledge had a higher correlation with
credit card use than total experience.

Also as anticipated, marital status had a negative relationship (significant at the .001 level) with bill paying. Because the non-married woman has total responsibility, she would be more likely to pay bills than the married woman.

Conservative/liberal orientation and attitudes about the need for government regulations had a significant positive correlation; those who were more liberal in their view on public issues were more supportive of the need for regulations. This relationship was anticipated as shown in the model (Figure 10).

The dependent variable, knowledge of credit regulations, was significantly correlated with income, total credit experience and credit card use at the .001 level; education and marital status at the .01 level and actions and problems related to credit regulations at the .05 level.

As presented in Table 17, two of the correlations between independent variables (income with age and marital status) were significant for the women's rights sample. That is, the older women were more likely to have higher income and to be married. Unlike the randomly drawn sample, income and education did not have a significant correlation.
The correlations between income, age and education were relatively low and these three variables could be used as independent variables in the regression analysis. However the .722 correlation of income and marital status suggested a possible interaction. This relationship was tested with slope dummies. Interaction was not thought to be present because the $R^2$ did not increase. Thus income and marital status could both be used as independent variables in the regression analysis.

Several significant correlations were found between intervening variables. Like the randomly drawn sample, there was a positive correlation between conservative/liberal orientation and attitudes supporting the need for government regulations. The correlation was higher for the women's rights sample which might be expected because of the nature of these organizations. Both samples strongly supported the need for government regulations. However, the women's rights sample rated themselves as more liberal and had more positive attitudes about needing regulations than the randomly drawn sample.

Total credit experience was significantly correlated at the .001 level with its four components, income and knowledge. The correlation of family income with credit card use was higher than the correlation of income with total credit experience. Knowledge and credit card use also had a positive correlation, significant at the .001 level. The correlation between credit card use and total credit experience was
higher for the women's rights sample than the randomly drawn sample. The correlation of credit card use and cash loan use was significant at the .001 level. Other than with total credit experience, there were few significant correlations of bill paying and actions and problems with other variables. Like the randomly drawn sample, age had a negative correlation at the .01 level with actions and problems related to credit regulations. That is, younger respondents reported more actions and problems related to credit regulations. This relationship is logical because younger persons may be more assertive.

The dependent variable, knowledge of credit regulations, had fewer significant correlations with other variables for this sample than in the randomly drawn sample. At the .001 level, it had a positive correlation with total credit experience and credit card use, at the .01 level with age and bill paying and at the .05 level with actions and problems related to credit regulations.

In summary, the zero order correlations between independent variables were low except for income and marital status. No interaction was found between family income and marital status, therefore income, age, marital status and education were used as independent variables in the path analysis. The correlations among the variables support relationships anticipated, but do not indicate relationships with the effect due to other variables controlled. For example, part of the correlation of education and knowledge may be due to the effect of the relationship of income and education. The correlation does not indicate the relationship of education and knowledge alone. In order to test the combination of variables, the direction or flow
hypothesized in the model and the effect of intervening variables, it was necessary to use additional statistical procedures. Path analysis was used for this phase of the analysis.

Path Analysis Testing the Model

**Dependent variable**

**Knowledge** According to the model, the dependent variable, knowledge of credit regulations was hypothesized to have four predictors. The null hypothesis tested was: There will be no significant relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, conservative/liberal orientation to public issues, credit experience and formal education. The regression of knowledge on education, attitudes toward government regulations, conservative/liberal orientation and total credit experience is presented in Table 18.

Education, attitudes about the need for government regulations, conservative/liberal orientation and total credit experience combined were significantly related to knowledge at the .01 level. Therefore, the null hypothesis was rejected. The total equation explained about 6% of the variation in knowledge in the randomly drawn sample. The small $R^2$ was not totally unexpected. Mandell (1971, 1973) also reported a low $R^2$ indicating poor predictability of credit knowledge: thus, a need for further research.
Table 18. Standardized regression coefficients for knowledge of credit regulations

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>F</td>
</tr>
<tr>
<td>Education</td>
<td>.139</td>
<td>10.473**</td>
</tr>
<tr>
<td>Attitudes</td>
<td>-.050</td>
<td>1.311</td>
</tr>
<tr>
<td>Orientation</td>
<td>.023</td>
<td>0.288</td>
</tr>
<tr>
<td>Credit Experience</td>
<td>.173</td>
<td>16.596**</td>
</tr>
</tbody>
</table>

| R²                      | .057                  | .049                  |
| F                       | 7.859                 | 3.607                 |
| df                      | 4 and 523             | 4 and 279             |
| Path Residual           | .971                  | .975                  |
|                         | P < .01               | P < .01               |

* Significant at .05.

** Significant at .01.

Credit experience had the greatest predictive power. For the randomly drawn sample, the F ratio of 16.596 is significant at the .01 level. This supports the idea that the greater the credit experience, the more exposure to credit disclosure and other results of regulations, the more salient the regulations and thus greater knowledge of the regulations.
The second variable which proved to be an effective predictor of knowledge in the randomly drawn sample was education. The F of 10.473 was significant at the .01 level. More formal education could have resulted in learning credit regulations in the classroom. For this study, however, it was assumed that such regulations were not learned in the classroom by respondents because of the newness of the regulations and the relative scarcity of courses which teach consumer regulations. Instead, more education likely results in creating an awareness of the need for information before making decisions, encouraging interest in keeping up to date on relevant new developments and increasing continued self-learning. More education may also indicate a greater capacity for learning.

Conservative/liberal orientation and attitudes about regulations were not found to be significantly related to knowledge. They were not significant in the zero order correlations either.

The null hypothesis was that there will be no significant relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, conservative/liberal orientation to public issues, credit experience and formal education. In the analysis of the women's rights sample, it was also found that these four variables were significant at the .01 level, thus the null hypothesis was rejected. About 5% of the variation in knowledge was explained. Although the
R² is low, the strength of the predictors contributes to the understanding of the relationship.

Credit experience also was the best predictor for this sample, significant at the .01 level. Unlike the randomly drawn sample, education was not found to be significant but orientation was at the .05 level.

The null hypothesis concerning knowledge was rejected in both samples. Two of the four hypothesized variables proved to be effective predictors of knowledge, the dependent variable, for the randomly drawn sample. Credit experience was the strongest predictor, followed by education. The other two hypothesized variables, conservative/liberal orientation and attitudes about the need for government regulations, were found not to be significantly related to knowledge. The four predictors together were significant at the .01 level and explained about 6% of the variation.

For the women's rights sample, both credit experience and orientation were found to be significant. Like the randomly drawn sample, credit experience was clearly the best predictor. The combination of variables was significant at the .01 level and explained about 5% of the variation.

Intervening variables

Attitudes The null hypothesis tested was that there will be no significant relationship between attitudes about the need for
government regulations to solve credit problems and conservative/liberal orientation, credit experience, age and marital status.

Table 19 shows the results of the regression of attitudes on these four variables. The null hypothesis was rejected because the overall equation is significant at the .01 level and it explains about 4% of the variation. Only one predictor was significant and the $R^2$ was low.

### Table 19. Standardized regression coefficients for attitudes about the need for government regulations

<table>
<thead>
<tr>
<th></th>
<th>Randomly Drawn Sample</th>
<th>Women's Rights Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>F</td>
</tr>
<tr>
<td>Age</td>
<td>-.023</td>
<td>.277</td>
</tr>
<tr>
<td>Marital Status</td>
<td>-.026</td>
<td>.375</td>
</tr>
<tr>
<td>Conservative/Liberal</td>
<td>.183</td>
<td>17.417**</td>
</tr>
<tr>
<td>Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Experience</td>
<td>-.019</td>
<td>.185</td>
</tr>
</tbody>
</table>

- $R^2$ = .037          - $R^2$ = .051
- $F = 5.025$            - $F = 3.775$
- df = 4 and 523        - df = 4 and 279
- Path Residual = .981   - Path Residual = .974
- $P < .01$              - $P < .01$

** Significant at .01.
This indicates a need for further research using other measures of the predictors or new predictors in addition to conservative/liberal orientation.

Conservative/liberal orientation proved to be by far the best predictor. In the randomly drawn sample, the F ratio of 17.417 was significant at the .01 level. Those who were more liberal were more likely to support the need for government regulations. The other three variables were not significantly related to attitudes about the need for government regulations.

Analysis of the women's rights sample also resulted in similar findings. The null hypothesis was rejected also for this sample. The overall equation with the four predictors was significant at the .01 level and explained about 5% of the variation. Again conservative/liberal orientation was by far the best predictor. It had an F ratio of 14.239 which was significant at the .01 level. Like the randomly drawn sample, the other three variables were not found to be significant.

Conservative/liberal orientation The null hypothesis tested was that there will be no significant relationship between conservative/liberal orientation to public issues and credit experience, age and formal education. Table 20 gives the results of the regression analysis. For the randomly drawn sample, the null hypothesis was rejected because the overall equation was significant at the .01 level and explained about 5% of the variation.
### Table 20. Standardized regression coefficients for conservative/liberal orientation

<table>
<thead>
<tr>
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<th>Randomly Drawn Sample</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>F</td>
</tr>
<tr>
<td>Education</td>
<td>.057</td>
<td>1.699</td>
</tr>
<tr>
<td>Age</td>
<td>-.200</td>
<td>20.599**</td>
</tr>
<tr>
<td>Credit Experience</td>
<td>-.003</td>
<td>.006</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$R^2$</td>
<td>.048</td>
<td>.108</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>8.727</td>
<td>11.332</td>
<td></td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>3 and 524</td>
<td>3 and 280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path Residual</td>
<td>.976</td>
<td>.944</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$P &lt; .01$</td>
<td>$P &lt; .01$</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at .01.

Age proved to be the only significant predictor. It had an $F$ ratio of 20.599 and was significant at the .01 level. The coefficient for age was negative which supports the idea that younger persons are more liberal. Education was not significant. This finding does not support the idea (McClosky, 1974) that persons with more education are more liberal, perhaps because age was not tested and could have had more influence on a liberal orientation.
The null hypothesis was also rejected for the women's rights sample. The overall equation was significant at the .01 level and explained about 11% of the variation. The $R^2$ for the women's rights sample was twice as high as the $R^2$ for the same equation for the randomly drawn sample. Respondents in the women's rights sample were likely to be more liberal and have more education. Education and age were better predictors of conservative/liberal orientation for the women's rights sample.

The best predictor of orientation for the women's rights sample was education, with an $F$ ratio of 25.036 significant at the .01 level. Those who had more education were more likely to be more liberal. Like the randomly drawn sample, age proved to be significant but the $F$ was not as large. The relationship was also negative as in the randomly drawn sample.

**Total credit experience** The intervening variable, total credit experience, as shown in the model (Figure 10) had three predictors: age, marital status and family income. The null hypothesis was that there will be no significant relationships between credit experience and marital status, age and family income. The hypothesis was rejected because the overall equation was significant at the .01 level and explained about 8% of the variation. Table 21 presents the results of this analysis.
Table 21. Standardized regression coefficients for total credit experience

<table>
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<tr>
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<th>Randomly Drawn Sample</th>
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</tr>
</thead>
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<tr>
<td></td>
<td>Beta</td>
<td>F</td>
</tr>
<tr>
<td>Age</td>
<td>-.171</td>
<td>16.522**</td>
</tr>
<tr>
<td>Marital Status</td>
<td>-.106</td>
<td>3.949</td>
</tr>
<tr>
<td>Family Income</td>
<td>.293</td>
<td>29.780**</td>
</tr>
<tr>
<td>R^2</td>
<td>.080</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>15.114</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>3 and 524</td>
<td></td>
</tr>
<tr>
<td>Path Residual</td>
<td>.959</td>
<td></td>
</tr>
</tbody>
</table>

** Significant at .01.

As expected, family income proved to be by far the best predictor in both samples. In the randomly drawn sample, family income was significant at the .01 level with an F ratio of 26.457. Also in the randomly drawn sample, age proved to be an effective predictor with an F ratio of 15.874, significant at the .01 level. The sign of the coefficient for age was negative indicating younger persons had more credit experience. This relationship was anticipated because credit
has become more available and increasingly accepted by and in fact a necessity for many younger persons. Although marital status did not prove to be significant until the .10 level, it does indicate that unmarried women tended to have more credit experience.

The null hypothesis was also rejected for the women's rights sample. The overall equation for the women's rights sample was significant at the .01 level with over 7% of the variation explained.

Family income was the strongest predictor as in the randomly drawn sample. It had an F of 15.858, significant at the .01 level. Age and marital status were not significant for the women's rights sample. Respondents were more likely to be younger and unmarried. For this group, income was clearly the best predictor of credit experience.

Summary

All four null hypotheses were tested and rejected. The results of the path analysis for the randomly drawn sample are given in Table 22 and Figure 11. Significant differences were found in the relationships of some of the predictors in each hypothesis.

Credit experience and education were significant at the .01 level in predicting knowledge of credit regulations. Credit experience was the best predictor, followed by education. Conservative/liberal orientation and attitudes toward the need for regulations did not prove to be effective predictors of knowledge of credit regulations.
Table 22. Standardized regression coefficients for the variables with the randomly drawn sample

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Knowledge</th>
<th>Attitudes</th>
<th>Orientation</th>
<th>Credit Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Income</td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td>.217**</td>
</tr>
<tr>
<td>Education</td>
<td>.139**</td>
<td>XXX</td>
<td>.057</td>
<td>XXX</td>
</tr>
<tr>
<td>Age</td>
<td>XXX</td>
<td>-.023</td>
<td>-.200**</td>
<td>-.168**</td>
</tr>
<tr>
<td>Marital Status</td>
<td>XXX</td>
<td>-.026</td>
<td>XXX</td>
<td>.079</td>
</tr>
<tr>
<td>Attitudes</td>
<td>-.050</td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Conservative/Liberal</td>
<td>.023</td>
<td>.183**</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Credit Experience</td>
<td>.173**</td>
<td>-.019</td>
<td>-.003</td>
<td>XXX</td>
</tr>
</tbody>
</table>

** Significant at .01.

All four predictors together were significant at the .01 level and explained about 6% of the variation.

The results of the path analysis for the intervening variables also provided insight into the differences already noted between the samples. For the randomly drawn sample conservative/liberal orientation was an effective predictor of attitudes about the need for government regulations. Those who support the need for regulations were more liberal. Age proved to be the only significant predictor of conservative/liberal orientation to public issues. Younger persons
Figure 11. Summary of results, randomly drawn sample
were likely to be more liberal. Two predictors of total credit experience were found to be significant: family income and age at the .01 level. Those with greater credit experience were respondents with larger incomes and were younger.

All four null hypotheses were tested and also rejected for the women's rights group. The results of path analyses are given in Table 23 and Figure 12. In each of the hypotheses, significant differences were found in the relationships of some of the predictors.

Table 23. Standardized regression coefficients for the variables with the women's rights sample

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
<th>Knowledge</th>
<th>Attitudes</th>
<th>Orientation</th>
<th>Credit Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Income</td>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td>.240**</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.086</td>
<td>XXX</td>
<td>.283**</td>
<td></td>
<td>XXX</td>
</tr>
<tr>
<td>Age</td>
<td>XXX</td>
<td>-.004</td>
<td>-.165**</td>
<td>-.089</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>XXX</td>
<td>.066</td>
<td>XXX</td>
<td>.143*</td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>.022</td>
<td>XXX</td>
<td>XXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conservative/Liberal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>-.105*</td>
<td>.225**</td>
<td>XXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Experience</td>
<td>.184**</td>
<td>-.033</td>
<td>-.142</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at .05.
** Significant at .01.
Figure 12. Summary of results, women's rights sample
Credit experience and orientation were effective predictors of knowledge of credit regulations. Also the directions of the attitudes and conservative/liberal orientation variables in predicting knowledge differed from the randomly drawn sample.

Conservative/liberal orientation was the best predictor of attitudes about the need for government regulations. Like the randomly drawn sample, the other three predictors were not effective. The signs indicate the more liberal younger, married women with less credit experience were more supportive of regulations. The three predictors of conservative/liberal orientation proved to be stronger for the women's rights sample. Both age and education were significant at the .01 level. More liberal respondents were younger and had more education. The best predictor of total credit experience was family income in this sample as well as in the randomly drawn sample. The samples differed with respect to the role of age. Neither marital status nor age was significant for the women's rights sample. Like the randomly drawn sample, those with the most credit experience had higher incomes.

In summary, all four null hypotheses were rejected for both samples. There were significant differences in some of the predictors in each hypothesis. The power of some of the variables and the direction of some of the relationships differed between the two samples. However, the results were similar for each hypothesis. Greater weight should be given to the results with the randomly drawn sample because
the statistics used were designed for probability samples. The $R^2$ was low but supports the findings of previous research. Further work is needed to improve understanding of predictors for knowledge of credit regulations. $R^2$ might be improved by refining the measures of the variables used in this study and also by using new variables.
SUMMARY AND RECOMMENDATIONS

The purposes of this study were to assess the level of women's knowledge of credit regulations and to ascertain the factors which affect knowledge. More specifically, the objectives were to:

(1) ascertain the relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, credit experience, conservative/liberal orientation to public issues and education.

(2) assess the relationship between credit experience and age, marital status and socioeconomic status.

(3) identify the relationship between conservative/liberal orientation to public issues and credit experience, age and education.

(4) explore the relationship between attitudes about the need for government regulations to solve credit problems and conservative/liberal orientation to public issues, credit experience, age and marital status.

The literature was reviewed for background in developing a theoretical framework for this study. Most of the previous research focused on Truth in Lending. No conceptual model for predicting differences in knowledge of credit regulations was found in the literature. No studies were found which concerned women's knowledge of credit regulations or used a multiple choice test to assess the knowledge level.

A conceptual model (Figure 6) with independent, intervening and a dependent variable, knowledge of credit regulations, was proposed. The hypotheses tested were based on the relationships among the variables in the model.
Because no appropriate instrument was available, an original questionnaire was developed. Questionnaires were mailed on February 1, 1976 to 1318 in a randomly drawn sample in the Des Moines, Iowa area and 441 members of the National Organization of Women and the Iowa Women's Political Caucus in the same area. Women between 20 and 65 were the intended sample. One week later, a reminder post card was sent to the complete sample. Non-respondents in both samples were sent the following week another questionnaire and reminder letter. Then telephone calls were attempted to the non-respondents in the randomly drawn sample whose telephone listing was a female name or initials. The resulting return rates were 59% for the randomly drawn sample and 72% for the women's rights sample.

Data analysis was based on 528 respondents in the randomly drawn sample and 284 in the women's rights sample. The Statistical Package for Social Sciences (Nie, et al., 1975) was used for the analysis. Parallel but separate analyses were performed because two samples were used in the study. The first section of the analysis and findings was the comparison of the two samples on age, income, marital status, attitudes toward government regulations, conservative/liberal orientation, credit experience and knowledge of credit regulations. The second phase of the analysis and findings was testing the model and hypotheses with path analysis.

The two groups differed on the independent variables. The respondents in the women's rights sample were more likely to be younger, not
married and have more education than those in the randomly drawn sample. The women's rights group had a much higher personal income. Because 44% were not married and did not have husbands' incomes to report, husband's income calculated for the total women's rights sample was lower.

Respondents in the women's rights sample were more supportive of the need for credit regulations than those in the randomly drawn sample. However, both groups strongly agreed with the need for regulations. As a group, those in the women's rights organizations rated themselves as far more liberal than those in the randomly drawn sample. Respondents in the women's rights sample also had more credit experience than those in the randomly drawn sample. Thus, the groups differed on the intervening variables.

The knowledge level of both groups was relatively low. However, the women's rights sample scored higher than the randomly drawn sample on the test about credit regulations, the dependent variable.

Zero order correlations between the independent variables were low except for income and marital status for both groups. Because no interaction was found between family income and marital status, income, age, marital status and education were used as independent variables for testing the model with path analysis. The correlations among the variables supported relationships anticipated. For example, the four components of credit experience were highly correlated with the composite measure and family income was highly correlated with credit experience.
Path analysis was used to test the combination of variables, the direction hypothesized in the model and the effect of intervening variables. The null hypotheses tested were:

(1) There will be no significant relationship between the degree of understanding of consumer credit regulations and the level of concern about the need for such regulations, conservative/liberal orientation to public issues, credit experience and formal education.

(2) There will be no significant relationship between credit experience and marital status, age and family income.

(3) There will be no significant relationship between conservative/liberal orientation to public issues and credit experience, age and formal education.

(4) There will be no significant relationship between attitudes, the need for government regulations to solve credit problems and conservative/liberal orientation to public issues, credit experience, age and marital status.

All null hypotheses were rejected for both samples because significant differences were found in relationships of some of the predictors in each hypothesis.

For the randomly drawn sample, credit experience and education were significant at the .01 level in predicting knowledge of credit regulations. Credit experience was the best predictor, followed by education. Credit experience, education, attitudes about the need for government regulations and conservative/liberal orientation combined explained
about 6% of the variation in knowledge of credit regulations. Credit experience also was clearly the best predictor, significant at the .01 level, for the women's rights sample. Unlike the randomly drawn sample, education was not found to be significant but orientation was significant at the .05 level. All four variables combined explained about 5% of the variation in knowledge of credit regulations. The low R² for both samples are consistent with previous research.

The results of testing the null hypothesis about attitudes was similar for both groups. Conservative/liberal orientation was the best predictor of attitudes, significant at the .01 level, for both samples. Conservative/liberal orientation, credit experience, age and marital status combined explained about 4% of the variation in attitudes for the randomly drawn sample and about 5% for the women's rights sample. These R² were low and suggest the need for further research with better measures of the predictors or different predictors.

Age was the best predictor of conservative/liberal orientation for the randomly drawn sample. The coefficient for age was negative for both groups, which supports the idea that younger persons are more liberal. Education was clearly the best predictor of orientation for the women's rights sample. Age, education and credit experience combined explained about 5% of the variation in conservative/liberal orientation to public issues for the randomly drawn sample and about 11% for the women's rights sample.

Family income, significant at the .01 level, was clearly the best predictor of credit experience for both samples. For the randomly drawn
sample, age also proved to be an effective predictor. For this sample, younger persons and those with higher income had more credit experience. Age, income and marital status combined explained about 8% of the variation in total credit experience. For the women's rights sample, only family income was significant. About 7% of the variation in credit experience was explained by the three predictors combined.

The results of the path analysis were similar for both samples, all four null hypotheses were rejected. There were differences between the two samples in the power of some of the predictors and the direction of some of the relationships. The low $R^2$ are consistent with previous research. The $R^2$ might be improved by refining the measures of some of the variables used in this study and also by substituting new predictors.

There are several possible explanations why the model did not effectively predict knowledge of credit regulations. Some changes might be made in the model itself. Based on the zero order correlations, direct arrows might be added from family income and marital status to knowledge. That is, these variables might have a direct effect on knowledge as well as the indirect effect through intervening variables tested in this study.

The high zero order correlation between credit card use and knowledge suggests that credit card use alone might be a better predictor than the composite measure used in this study. The increased popularity of credit cards supports the idea of using it as a predictor of knowledge.

The results of the path analysis indicated that attitudes about the need for government regulations was not an effective predictor. Because
the scale had high reliability and was a good measure, it appears that this variable is not important in predicting knowledge. The predictive power of the model might be improved by deleting this variable.

Credit experience was clearly the best predictor of knowledge in this study. This finding suggests an area to concentrate on in future research. In addition to credit card use included in this study, there may be other dimensions of credit experience not tested that are related to knowledge. One consideration is the importance of the credit decision. How important the credit decision is may affect the consumer's interest in and knowledge of credit regulations.

Time may be a critical factor. Perhaps many consumers are aware of credit regulations when making credit decisions but then forget provisions which do not continue to be salient. Therefore, greater knowledge of credit regulations might be found in a study of consumers who recently made a sizable purchase such as an automobile on credit in the last two months.

In addition, it may be that considerations other than optimizing their financial resources are important to some consumers. Perhaps saving time is more critical in the total resource mix. This may be particularly true of gainfully employed women. That is, credit decisions may be based more on time available and convenience of source of credit instead of searching the market alternatives and learning the information provided by credit regulations. The assumption that consumers need accurate information to make wise choices may not hold for all consumers in every
credit decision. However, it is important to uphold the consumer's right to know and have regulations which provide interested consumers with needed information.

Another factor which might affect knowledge is the gainful employment experience of women. Because the coding used for occupation in this study was not an interval scale, occupation could not be tested. Work experience might be included in future research efforts.

Other recommendations for future research regarding knowledge of consumer credit regulations were:
1. Replicate this research with other samples to further validate the model. The conceptual model developed for this study was the first known model for predicting knowledge of credit regulations.
2. Conduct the study in the same area at a later time to ascertain if there would be greater knowledge of credit regulations with more opportunity and time to learn about the newer regulations.
3. Repeat the research with a large enough sample to allow segmentation within the unmarried category. A randomly drawn sample of 1318 in the Des Moines area did not yield sufficient numbers of unmarried women for segmented analysis. There may be differences between widows and divorcees' attitudes, experiences and knowledge of credit regulations.
(4) repeat the study with both men and women to compare differences.
(5) refine the measures of some of the variables. For example, develop additional questions to improve the measure of conservative/liberal orientation to public issues.
(6) eliminate the least effective variables and replace them with new predictors, if refining the measures of variables used in this study does not increase the $R^2$. For example, omit attitudes about the need for government regulations to solve credit problems in predicting knowledge of credit regulations and/or substitute other new variables.
(7) repeat the study and focus on credit in a married woman's own name. As women gain more experience with their new legislative rights, use of credit in their own names should be investigated.
(8) administer the multiple choice test on credit regulations along with similar tests on other topics to assess a broader definition of consumer knowledge. The test reliability was good and could be used alone or included with other aspects of consumer competence.
(9) use the scale of 22 attitude questions in research related to consumer support for government involvement in consumer protection. The scale reliability was high and could be used alone or included with other aspects of the consumer movement.

Recommendations for educational programs related to consumer credit regulations were:
(1) develop educational programs, especially designed for women, on consumer credit regulations. The relatively low scores on the test of
knowledge indicated the need for consumer education. Although the women's rights sample scored higher, most respondents in that sample could also benefit from educational programs on consumer credit regulations.

(2) focus educational efforts on groups which are likely to have less knowledge. The findings suggest that women with less education and less credit experience have less knowledge about credit regulations.

(3) consider the influence of credit experience on knowledge when planning educational programs. Credit experience was clearly the most important predictor of knowledge in this study. This suggests the importance of using case studies, role playing and other teaching techniques to simulate credit experience.

(4) develop educational programs for consumers at point of use. The teachable moment for consumer education on credit may be at the time of credit decisions. Educational programs could be cooperative efforts with credit granters such as providing consumer information in credit card mailings.

(5) use the multiple choice test on credit regulations as a part of an educational program. The test reliability was good and could be used as a pre or post test or part of a longer test in a classroom or informal teaching situation.

(6) administer the attitude scale in classes and adult education programs. The scale reliability was high and could be effectively used to stimulate interest in learning about credit regulations.
(7) use mass media for consumer education on credit regulations. The relatively low level of knowledge of credit regulations indicates the need for wide reaching consumer education.

Recommendations for public policy makers were:
(1) consider the strong support of women for government regulations to solve credit problems. Both samples in this study strongly supported government protection of consumers in the area of consumer credit.
(2) include consumer education in future consumer credit regulations. Consumers need to know the provisions of regulations in order to make use of their rights. Women in this study had a relatively low knowledge of credit regulations.

Recommendations for creditors were:
(1) clearly explain the reasons for credit decisions. In this study, a relatively large number of women reported being denied credit. Because this study did not include creditors' views, the actual number of women turned down for credit may have been more or less. Legislation went into effect about the time of the survey which requires disclosure of the reasons for credit denial and prohibits discrimination because of sex and marital status. Reasons should also be given for other credit decisions such as the basis for determining the dollar limit allowed for credit card purchases.
LITERATURE CITED


APPENDIX A. QUESTIONNAIRE: CONSUMER CREDIT SURVEY
CONSUMER CREDIT SURVEY

IOWA STATE UNIVERSITY
AMES, IOWA
Dear Resident:

Being able to get consumer credit is important to most Iowans. It helps to know how to shop for credit and use it wisely. There are several laws related to credit that can help consumers as they shop and use credit.

We are conducting a survey on consumer credit in order to develop educational programs that will benefit Iowa citizens. The survey is on consumer credit used by women age 20 to 65, and we are interested in the extent of credit used and opinions on government regulations related to credit.

If you are a woman at least 20 years of age and less than 65, would you please answer the questions on the enclosed form and return it to us in the envelope provided; no stamp is needed. It will only take a few minutes but will be very valuable to our survey.

Your name was selected on a random basis and your answers are important to the accuracy of the study. Your answers will be confidential. Each questionnaire contains an identification number for mailing purposes only. This is so that it can be checked off the mailing list when the questionnaire is returned. Names are not placed on the questionnaire. Also, results of the study will not identify individual answers.

If you are not eligible but someone else in your home is, please give this to her. If there is no woman between 20 and 65 in your home, check here □ and return it in the enclosed envelope.

In return for your cooperation, I'll be glad to send you an Iowa State University Extension publication, "It's To Your Credit". It explains several new consumer protection regulations related to credit. All you need to do is write your return address on the back of the envelope.

If you have questions, please call me collect on February 7 at 292-6457.

Thanks so much for your help.

Sincerely,

Karen B. Hull
Extension Specialist
Home Management
66 LeBaron Hall

Iowa State University and U. S. Department of Agriculture cooperating
Credit ratings are based mainly on the file kept on most people of personal information and credit experience. Some of the statements below ask what rights you feel are important about your credit file. Your opinion on credit cards, credit discrimination and other credit concerns are also asked. Indicate how you feel about each by circling one answer for each statement.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

I think it is important that there be a law or government regulation which:

1. allows me to find out the information in my credit file which is used as a basis for determining my credit rating.
2. requires reinvestigation of information I do not feel is correct in my credit file.
3. permits me to find out who has requested information on my credit file in the last six months.
4. allows me to add my side of the story if I don't agree with information in the credit file used to determine my credit rating.
5. allows me to have information which might give me a bad credit rating dropped from my credit file after 7 years.
6. allows a married woman to have a separate credit file such as (Jane Jones) instead of a joint file under her husband's name (Mrs. Dave Jones).
7. allows a married woman who earns money to have a separate credit file (Jane Jones) instead of a joint family file under her husband's name (Mrs. Dave Jones).
8. requires equal standards for granting credit to men and women.
9. requires the same standards for granting credit regardless of whether or not a person is married, widowed, single or divorced.
10. allows alimony and child support payments to be considered in the same way salary and wages are for determining credit worthiness.
11. allows a married woman who is employed and meets the standards to get credit in her own name (Jane Jones) without having her husband's signature on the contract.
12. allows a married woman to have her name (Jane Jones) on credit accounts instead of having the account only in her husband's name (Mrs. Dave Jones).
I think it is important that there be a law or government regulation which:

13. requires written explanation of the reasons for being denied credit

14. requires a written explanation of the reasons for being denied credit when the person requests it

15. limits the amount I have to pay for bills charged by someone else using my lost or stolen credit cards

16. does not allow companies to send me credit cards I did not ask for

17. gives me a chance to cancel a credit contract from a door to door salesperson within a few days

18. gives me a chance to cancel any credit contract within a few days

19. requires all creditors to tell me clearly in writing the total cost of credit

20. requires all creditors to figure and state the cost of credit in the same way making it easier to see which creditor's plan costs the least

21. requires all creditors to state the cost of credit as the annual percentage rate, that is, the cost figured per year

22. requires that creditors state in writing the total dollar cost of credit before I buy on credit

The following questions concern credit knowledge. Please circle the one number which best represents your answer to each of these questions.

23. To build a good credit rating it is important to
   1. have several credit cards
   2. pay bills on time
   3. use a lot of credit
   4. I don't know

24. An interest rate of 1 percent per month is:
   1. 1 percent per year
   2. 6 percent per year
   3. 12 percent per year
   4. I don't know

25. To save money on credit charges for a loan, choose a loan with the
   1. lowest monthly payment
   2. lowest interest rate
   3. longest repayment period
   4. I don't know
26. An advantage to consumers of using credit is:

1. costs less than paying cash
2. often spend more than if I had to pay with cash
3. can use goods before paying for them
4. I don’t know

27. There is a federal law which allows me to

1. find out what information is in my credit file that could be used to determine my credit rating
2. receive a copy of my credit rating when I request it
3. prevents a business from keeping records on me for a credit rating
4. I don’t know

28. There is a federal law on credit ratings which allows me to

1. receive a copy of information about my payment record which creditors send into the master record on me, if I request it
2. have information about my payment record for bills erased if it hurts my credit rating
3. add my side of the story when I do not agree with a creditor’s report on my payment record
4. I don’t know

29. Circle which one of these places collects credit information on consumers and provides it to stores, banks and other places which extend credit:

1. credit union
2. county court house
3. credit bureau
4. I don’t know

30. According to an Iowa law, I

1. can cancel a credit contract for any amount from a door to door sales person within 3 business days
2. can cancel a credit contract for $25.00 or more from a door to door sales person within 3 business days
3. can cancel any credit contract within 3 business days
4. I don’t know

31. There is a federal law on credit which

1. requires credit granters to state in writing the total cost of credit
2. requires credit granters to charge minimum interest rates
3. requires creditors to send me updated statements on how much I owe
4. I don’t know

32. A federal government regulation

1. limits to $100.00 the amount of bills I have to pay if someone else uses my lost or stolen credit cards
2. says I don’t have to pay any of the bills if someone else uses my lost or stolen credit cards
3. limits to $50.00 the amount of bills I have to pay if someone else uses my lost or stolen credit cards
4. I don’t know
Circle the answer to these questions.

33. According to a federal regulation, companies which issue credit cards
   1 can send them to anyone even though not requested
   2 can send them only when I request them
   3 can send them only to adults
   4 I don't know

34. A federal law requires creditors to
   1 tell me what method they use to figure the interest rate but does not
     require a standard method
   2 use the monthly percentage rate when quoting the interest rate, that is
     the interest rate based on one month
   3 use the annual percentage rate when quoting the interest rate, that is
     the interest rate based on one year
   4 I don't know

35. A federal regulation
   1 requires creditors not to treat persons applying for credit any
     differently due to their marital status
   2 allows creditors to rate credit worthiness based on a person's marital
     status
   3 allows creditors to rate a divorced person as less credit worthy than
     someone who is not divorced
   4 I don't know

36. According to a federal government regulation
   1 creditors can view men as less credit worthy than women
   2 creditors can view women as less credit worthy than men
   3 creditors can not use a person's sex as the reason to deny credit
   4 I don't know

To answer these questions related to credit used, please circle a number or fill
in the blank.

37. Do you or your family members have any credit cards?
   1 No       If No, go to 51. on page 5.
   2 Yes

What is the number of credit cards of each type held by you and members of
your family household?

38. ____ Master Charge and/or Bank Americard
39. ____ Stores (department and other)
40. ____ Gas and oil company
41. ____ Other (list) __________________________________________
If NOT married, go to 44.

42. Are any of these credit cards in your name only (such as Jane Jones, not Mrs. Dave Jones)?
   1 No If No, go to 48.
   2 Yes

43. How many of the credit cards are in your name?
   ____ Number

   For those you use regularly (in your own name or in your husband's)
   how many times in an average month do you use each type?

   Times used
   a month

   44. ____ Master Charge and/or Bank Americard
   45. ____ Stores (department and other)
   46. ____ Gas and oil company
   47. ____ Other

48. Approximately what is the total monthly payment you and your family make for
   all credit card charges?
   ____ dollar amount

51. In the last two years, have you or your family members borrowed money other
   than for a home mortgage? Please circle the answer.
   1 No If No, go to 73 on page 6.
   2 Yes

   If you or your family members have borrowed in the last two years (other than
   for a home mortgage) how many times have you borrowed from these sources:

   Number of
   times

   52. ____ Bank
   53. ____ Auto Loan Company
   54. ____ Credit Union
   55. ____ Small Loan Company
   56. ____ Insurance Company
   57. ____ Family (Relatives)
   58. ____ Friends
   59. ____ Other (explain)

If NOT married, go to 69. on page 6.

60. Did you borrow in your name only (Jane Jones) in any of these instances?
   1 No If No, go to 69. on page 6.
   2 Yes

TURN PAGE CAREFULLY
Circle which sources you borrowed from where you used your name only.

61. Bank
62. Auto Loan Company
63. Credit Union
64. Small Loan Company
65. Insurance Company
66. Family (Relatives)
67. Friends
68. Other

69. Approximately what is the total dollar amount of the monthly payment you and your family make for all loans (other than a home mortgage)?

_______ dollar amount

Circle the things you bought using these credit cards and cash loans during the last two years:

72. motor vehicles: new or used
73. motor vehicles: gas, oil or repairs
74. appliances
75. TV
76. furnishings
77. clothing
78. education
79. vacation or recreation
80. other: explain __________________________

81. Circle the number which shows how often you pay the bills for credit charges and cash loans made by you and your family.

1 never
2 seldom
3 usually
4 always

82. Circle one number of the reason that usually is most important to you for deciding where to get credit.

1 where it costs the least
2 where you could get it quickly
3 habit, where you have gotten it before
4 where the monthly payments were the lowest
5 other (explain) __________________________

These questions concern experiences related to credit. Please circle one number to answer these questions.

83. Have you gone to check on your credit file in the last five years to see if it is correct?

1 No
2 Yes
84. Have you canceled a credit contract from a door to door salesperson?  
   1 No  
   2 Yes

85. Have you lost your credit cards or had them stolen?  
   1 No If No, go to 87.  
   2 Yes

86. If yes, have you received bills someone else charged on your lost or stolen credit cards?  
   1 No  
   2 Yes

87. In general, have you heard that women have a harder time getting credit than men of equal credit rating?  
   1 No  
   2 Yes

88. In general, have you heard that marital status makes a difference in getting credit, that married women or men can get credit easier than those who are not married?  
   1 No  
   2 Yes

89. Have you personally been turned down for credit in the last 5 years?  
   1 No If No, go to 93. on page 8.  
   2 Yes

90. Do you believe the reason was because of being a woman?  
   1 No  
   2 Yes Please explain the circumstances ______________________ 
                  ______________________

91. Do you believe the reason was because of your marital status?  
   1 No  
   2 Yes

92. If so, circle what it was at that time.  
   1 Married  
   2 Separated  
   3 Single, never married  
   4 Widowed  
   5 Divorced  

   Please explain the circumstances ______________________
If NOT married, go to 97.

93. Have you tried to get credit cards in your own name (Jane Jones, not Mrs. Dave Jones)?
   1 No
   2 Yes

94. If yes, have you had any trouble getting credit cards in your own name?
   1 No
   2 Yes
   Please explain: ____________________________________________________________

95. Is your credit file used to determine your credit rating in your own name?
   (Jane Jones, not Mrs. Dave Jones)
   0 Don't know
   1 No
   2 Yes

96. If yes, did you have any difficulty getting it?
   1 No
   2 Yes
   Please explain: ____________________________________________________________

Would you answer these questions about yourself? Please circle the number of your answer.

97. Have you worked for pay in the last year?
   1 No
   2 Yes

98. If you work for pay, how many hours is a usual work week?
   1 Full time - 35 hours per week or more
   2 Part time - less than 35 hours per week

99. What is your occupation? ____________________________ (Please explain the kind of work, not where you work. If unemployed or retired, what was your most recent occupation?)

100. Where do you work? ________________________________

101. Circle the number of the category of your age.
   1 20-24 years  6 45-49 years
   2 25-29 years  7 50-54 years
   3 30-34 years  8 55-59 years
   4 35-39 years  9 60-64 years
   5 40-44 years
102. If married, what is your husband's occupation? 
(Please explain the kind of work, not where he works. If unemployed or retired what was his most recent occupation?)

103. If married, where does he work? 

104. What is your present marital status? (circle one)
1 married
2 separated
3 single
4 widowed
5 divorced

105. Circle which is the highest grade in school you completed?
1 elementary school
2 some high school
3 high school graduate
4 business, vocational or technical training after completion of high school
5 some college
6 college graduate
7 post graduate courses
8 advanced degree(s)
9 other: 

106. Circle the one answer that most closely describes your own views generally on public issues.
1 very conservative
2 conservative
3 moderate
4 liberal
5 very liberal

107. Circle which of these ranges of money income (before tax) does the total of all money you personally earned during 1975 best fit.
0 0
1 less than $3,000
2 $3,000 to $5,999
3 $6,000 to $8,999
4 $9,000 to $11,999
5 $12,000 to $14,999
6 $15,000 to $17,999
7 $18,000 to $20,999
8 $21,000 to $23,999
9 $24,000 and over

108. If married, circle which of these income ranges does the total of all money (before taxes) your husband earned during 1975 best fit.
0 0
1 less than $3,000
2 $3,000 to $5,999
3 $6,000 to $8,999
4 $9,000 to $11,999
5 $12,000 to $14,999
6 $15,000 to $17,999
7 $18,000 to $20,999
8 $21,000 to $23,999
9 $24,000 and over

PLEASE TURN PAGE CAREFULLY
Circle any of the following organizations you belong to:

109. American Association of University Women
110. Business and Professional Women's Club
111. Church women's groups
112. Common Cause
113. Farm Bureau Women
114. Iowa Consumers League
115. Iowa Women's Political Caucus
116. John Birch Society
117. League of Women Voters
118. PTA
119. Welfare Rights Organization
120. Women's auxiliaries of men's organizations (firemen, Moose, etc.)
121. Other women's organizations (list)

22. Now

_________________________________________

_________________________________________

Are there any comments you wish to make which would help us develop educational programs related to credit?

Your response to these questions is very greatly appreciated.

If you would like to have the Iowa State University publication, "It's To Your Credit", please print your name and address on the back of the return envelope (not on this questionnaire). I'll be glad to send you a copy.
APPENDIX B. CORRESPONDENCE
Letter to Cooperative Extension Staff
January 30, 1976

To: Staff in the Des Moines Area and Polk County Office

A copy of the questionnaire being sent to a representative sample of residents and the members of NOW and Iowa Women's Political Caucus in the Des Moines area is circulating in your office. It is a part of the research for my Ph.D. on consumer credit use, attitudes and knowledge of consumer protection regulations of women 20 to 65. I am not asking you to do anything, but wanted you to know about it.

Since the results will be based on a probability sample, we can generalize to the population. This will be extremely valuable for planning educational programs. We have not had this kind of basis before, and it will help us zero in with market segmentation of educational programs designed to fit the needs of audiences. The demographic data will be useful to all of us and the specific attitudes, knowledge and practices will be of special interest to consumer educators.

I want you to have this information for your future planning and also so you can answer questions if anyone asks you about it.

Sincerely,

Karen B. Hull
Extension Specialist
Home Management

KBH/kb
cc M. Yoder
     R. Deacon
Letter to Des Moines Chamber of Commerce, Des Moines Better Business Bureau, Iowa Credit Union League, Iowa Bankers Association and Superintendent of Banking
February 2, 1976

Mr. Al Jordon
Iowa Credit Union League
3206 University
Des Moines, IA 50311

Dear Mr. Jordon:

Enclosed is a copy of the survey being sent to a representative sample of residents in the Des Moines area. As the letter explains, it concerns credit use and opinions about government regulations and is intended for women from 20 to 65 years of age. The results will help us develop educational programs designed to better meet the needs of women. They also should be useful to you. If you have any questions, or would like our new Iowa State University publication "It's to Your Credit," let me know.

Sincerely,

Karen B. Hull
Extension Specialist
Home Management

Enclosure

cc: Ms. Evelyne Kieler, Des Moines Chamber of Commerce
Mr. Jerry Poffenberger, Des Moines Better Business Bureau
Mr. Neil Milner, Iowa Bankers Association
Mr. Thomas Huston, Superintendent of Banking
Follow-up Post Card to Samples
Last week a survey was mailed to you asking for your opinions and experiences related to consumer credit.

If you have completed the survey and returned it, I thank you. If not, please do so today. Because it was sent to a representative sample of residents, your answers are important to the accuracy of the survey.

In return for your help, I'll be glad to send you a new Iowa State University publication, "It's To Your Credit." It explains several new laws related to credit. If you would like a copy, write your return address on the back of the envelope when you return the survey.

Karen B. Hull, Extension Specialist
Home Management
66 LeBaron Hall, ISU
Follow-up Short Letter to Samples
February 19, 1976

Dear Resident,

On February 1, the Consumer Credit Survey was mailed to you. If you've mailed it back in the last few days, thank you. Because your opinions are important and it has not come as of today, I am writing you again. A replacement survey is enclosed in case you did not receive the first copy. Please return it in the enclosed envelope, no postage is needed. I would appreciate receiving your survey back in the next few days.

If you would like a copy of Iowa State University's new publication "To Your Credit" which explains several new laws related to credit, I'll be glad to send it to you. Just put your address on the back of the envelope.

Thanks for your help.

Sincerely,

Karen B. Hull
Extension Specialist
Home Management

Iowa State University and U. S. Department of Agriculture cooperating
APPENDIX C. DICTIONARY OF OCCUPATIONAL TITLES CODING

0 - No response
1 - Professional, technical and management
2 - Clerical and sales
3 - Service
4 - Farming, fisheries, forestry
5 - Processing
6 - Machine trades
7 - Bench work
8 - Structural work
9 - Miscellaneous
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