

College Students and Credit Cards: Do Attitudes Affect Behavior?

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Introduction

College and high school students previously had difficulty getting credit cards because they were considered to have poor credit worthiness. Now, they are targets of credit card companies. Many special offers are designed to attract college students to own and use credit cards (Credit Card Wars, 1989). Targeting 13 million college students has been one marketing strategy to increase the number of credit cardholders (Scholssberg, 1993). Credit card ownership among undergraduates increased 29% from 1988 to 1989, and another 6% from 1989 to 1990 (Punch, 1991). A recent survey conducted by Consumer Federation of America and American Express Company showed that almost three-fourths of college students had a credit card before they graduated (Hanson, 1993). Marketing efforts are expected to pay off in the future because college-educated consumers are more likely to own and use credit cards (Mandell, 1972; Bloom & Steen, 1987).

The aggressive marketing campaigns toward college students are controversial and raise concerns by credit counselors, educators, legislators, and parents (Many College Students, 1994). Stories about the large debt owed by college students, mostly from using credit cards, imply the inappropriateness of marketing efforts. However, arguments from marketers and college students seem to justify credit card companies' actions. Thus, more research is needed to understand college students' credit card behavior and to explore the impact of using credit cards in college on a consumer's future economic life.

There have been a number of studies about college student credit card behavior (Sholten, 1981; Danes & Hira, 1987; Stokes, 1987; Churaman, 1988; CFA & AEC, 1993; Makela, Punjvat, & Olson, 1993; Armstrong & Craven, 1993). However, most of these studies were descriptive, and none of them focused on attitudes and their effects on credit card behavior.

This study focuses on the attitude-behavior consistency of college students' credit card behavior. The research question was: among college students, do attitudes toward credit cards affect credit card behavior? Specifically, this study investigated the effectiveness of a three-component attitude model in explaining credit card behavior among college students, compared with the traditional single component attitude model.

Hypotheses

Because the single component attitude model did not predict behavior very well, psychologists proposed a multi-component construct composed of three components of attitude: affective, cognitive, and behavioral (conative) (Rosenberg & Hovland, 1960). As Greenwald (1968) explained, the different attitudinal components involve separate learning processes and antecedent conditions. Specifically, affective responses are acquired through classical conditioning that occurs when a neutral and affective stimulus are present contiguously. Cognitions are acquired via the cognitive learning of persuasive communications. Behavioral tendencies are acquired by instrumental learning when a behavior is positively or negatively reinforced (Greenwald, 1968).

The validity of the tripartite classification of attitude has been empirically investigated in previous psychological studies (Bagozzi, Tybout, Craig, & Sternthal, 1979; Kothandapani, 1971; Ostrom, 1969). Empirical evidence supported the convergent and discriminant validity of the construct, but predictive validity received limited support by empirical investigation (Bagozzi et al, 1979).

In this study, the predictive validity of the tripartite classification of attitude was investigated and two specific hypotheses were tested:

- H1: Different components of attitude toward credit cards will influence different aspects of credit card behavior of college students;
- H2: The three-component attitude model has better predictive power than the single component attitude model.

Methodology

Data Collection

The survey questionnaire consisted of two parts: credit card attitudes and behavior. The first part of the questionnaire was constructed using 37 attitude statements based on a tripartite classification of attitudes and pretested at a western university. (See Xiao, Noring, & Anderson, 1995 for details.) The second part of the questionnaire consisted of questions about credit card behavior, such as ownership, number of credit cards held, and frequency of using credit cards. These questions were developed by three consumer economics professors and were based on the literature. The instrument was administered during class meetings to students enrolled in six consumer economics courses in the fall semester of 1993 at an eastern university. In all, 137 students completed usable questionnaires. Of those surveyed, 61% were females, 53% were from out of state, 72% lived off campus, and 60% had at least a part-time job. Fifty-two percent had favorable attitudes toward credit cards, and 92% had at least one credit card. Students had an average of 3.9 credit cards and used them an average of 6.4 times per month.

Variables

Dependent variables were ownership, number of credit cards held, and frequency of credit card use. Dummy variables were used to measure ownership of: (a) major credit cards (Visa, MasterCard, American Express, or Discover), (b) store cards, (c) phone cards, (d) gas cards, and (e) all credit cards. Three sets of dummy variables measured number of credit cards held by students: (a) number of all credit cards, (b) number of major credit cards, and (c) number of store cards. Frequency of all credit card use and frequency of major credit card use were measured as number of times used per month.

Two sets of attitudinal variables were used as independent variables. The first set included only a single attitude variable, which was the sum of all attitude scores. The second set included three attitudinal variables: affective, cognitive, and behavioral component, based on the three-component model. The three attitude component variables were measured by the sum of scores of each category.

Analytical Procedure

First, Analysis of Variance (ANOVA) or Chi-square tests (depending on whether the dependent variable was a continuous or dummy variable) were conducted to identify factors that influenced credit card ownership, number of credit cards, and frequency of use. Second, attitudinal and student characteristic variables that showed influences on the credit card usage variables were included in the multivariate analyses. Multiple regression models were used when the dependent variables were continuous, and probit models were used when dependent variables were dummy ones. Third, to compare the predictive powers of the three-component attitude model and the single-component attitude model, step two was repeated, in which all variables remained the same except for the three attitude component variables that were substituted by the total attitude variable.

Results and Discussion

Credit Card Attitudes and Ownership of Credit Cards

Table 1 presents results of Chi-square tests regarding the relationship between credit card ownership and attitudes. Affective and cognitive attitudes were significantly related to ownership of all credit cards and ownership of major credit cards, while behavioral attitude was related to ownership of phone cards. When credit card attitudes were measured by the single variable, overall attitude, the relationship was significant only for ownership of all credit cards and ownership of major credit cards.

When probit analysis was conducted and some student characteristic variables were controlled, effects of some attitudinal variables disappeared (results of multivariate analyses available from first author upon request). Cognitive attitude influenced ownership of all credit cards, affective attitude influenced ownership of major credit cards, and behavioral attitude affected ownership of phone cards. Probit analysis was repeated substituting the overall attitude variable for the attitude component variables, and all attitudinal effects disappeared.

Table 1. Credit Card Ownership by Attitudinal Variables:
Selected Chi-Square Test Results (n=137)

	All Credit Cards	Major Credit Cards	Phone Cards
Total sample	92%	89%	29%
<u>Affective attitude</u>			
less favorable	84**	80**	
more favorable	98	95	
<u>Cognitive attitude</u>			
less favorable	84**	82*	
more favorable	96	92	
<u>Behavioral attitude</u>			
unfavorable		23**	
neutral		24	
favorable		50	
<u>Overall attitude</u>			
less favorable	86**	83**	
more favorable	97	94	

* $p \leq .10$; ** $p \leq .05$

Credit Card Attitudes and Number of Credit Cards Held

Table 2 presents the ANOVA results in terms of the relationship between credit attitudes and number of credit cards held. Affective attitude had a significant relationship with number of all credit cards

Table 2. Number of Credit Cards by Attitudinal Variables:
Selected ANOVA Results (n=137)

	Number of All Credit Cards	Number of Store Cards
Total sample	3.9	1.6
<u>Affective attitude</u>		
less favorable	3.4*	1.2*
more favorable	4.3	1.8
<u>Behavioral attitude</u>		
unfavorable	3.6*	
neutral	3.7	
favorable	5.0	

* $p \leq .10$

and number of store cards, while behavioral attitude was related to number of all credit cards.

Multiple regression results showed that affective attitude was a significant predictor of number of all credit cards and number of store cards. When the multiple regression models were conducted using the overall attitude variable instead of the separate attitude variables as the independent variable, the attitudinal effects still existed but were smaller.

Credit Card Attitudes and Frequency of Using Credit Cards

ANOVA was conducted to test the relationship between credit card attitudes and frequency of use (Table 3). Only behavioral attitude had a significant relationship with frequency of all credit card use and frequency of major credit card use.

Table 3. Frequency of Using Credit Cards by Attitudinal Variables: Selected ANOVA Results

	Credit Cards (n=126)	Major Credit Cards (n=111)
Total sample	6.4	4.4
<u>Behavioral attitude</u>		
unfavorable	4.8*	3.3**
neutral	6.3	4.1
favorable	8.5	6.4

*p ≤ .10; **p ≤ .05

Multiple regression results indicated that behavioral attitude effects still existed when other variables were controlled. Frequency of all credit card use and frequency of major credit card use would increase (13% and 16%, respectively) when the behavioral attitude score increased one point. When the multiple regression models were repeated substituting the overall attitude for the separate attitude variables, the effects remained, but were smaller. Frequency of all credit card use and frequency of major credit card use would increase 6% and 5.6% when the overall attitude score increased one point.

Discussion

Findings suggested that different components of attitudes may influence different aspects of credit card behavior, thus supporting the first hypothesis. For example, affective attitude was associated with number of any type of credit card and number of store cards, while behavioral attitude was associated with frequency of all credit card use and frequency of major credit card use. Further, only cognitive attitudes were related to ownership of all credit cards, affective attitudes were related to ownership of major credit cards, and behavioral attitudes were related to ownership of phone cards.

Findings also implied that the three-component attitude model may have better explanatory power than the single-component attitude model, thus supporting the second hypothesis. Table 4 summarizes the attitudinal effects on credit card behavior among college students. Findings indicated that sometimes the attitude component variables

Table 4. Summary of Effects of Attitudinal Variables on College Student's Credit Card Behavior

	Single Attitude Variable	Tripartite Attitude Variable		
		Affec- tive	Cogni- tive	Behav- ioral
<u>Bivariate Analysis</u>				
Own all credit cards	Y**	Y**	Y*	N
Own major credit cards	Y**	Y**	Y*	N
Own phone cards	N	N	N	Y**
Number of all credit cards	N	Y*	N	Y*
Number of store cards	N	Y*	N	N
Frequency of using all credit cards	N	N	N	Y*
Frequency of using major credit cards	N	N	N	Y**
<u>Multivariate Analysis</u>				
Own all credit cards	N	N	Y*	N
Own major credit cards	N	Y**	N	N
Own phone cards	N	N	N	Y*
Number of all credit cards	Y**	Y**	N	N
Number of store cards	Y**	Y**	N	N
Frequency of using all credit cards	Y**	N	N	Y**
Frequency of using major credit cards	Y	N	N	Y**

Y = effect showed, N = no effect; * p ≤ .10; ** p ≤ .05

showed effects but the overall attitude variables did not, which was the case of credit card ownership. If both attitude component variables and overall attitude variables showed effects, the effects of attitude component variables were greater, which was the case in credit card number and frequency of use.

Conclusions and Implications

This study investigated the relationship between credit card attitudes and behaviors of college students within a framework of tripartite classification of attitudes. Results indicated that behavioral attitudes influenced frequency of major credit card use (Visa, MasterCard, American Express, and Discover) and frequency of all credit card use (major credit cards, store cards, phone cards, and gas cards). Affective attitudes influenced the number of store cards and number of all credit cards held. Ownership of phone cards was affected by behavioral attitude, major credit cards by cognitive attitude, and all credit cards by affective attitude. Results also suggested that the three-component attitude model is better than the single-component attitude model when predicting credit card behavior among college students. However, the study did not find attitudinal effects on ownership of store cards and gas cards, nor on the number of major credit cards held when both three-component and single-component attitude models were used. Thus, the findings can only be considered to offer partial support for whether credit card attitudes predict credit card behavior. The limitation of this study is that the credit card behavior variables include only ownership, number, and frequency of credit card use. Other behavioral variables could be examined, such as payment habit, problem patterns, amount charged, and goods purchased with credit cards.

Future research could be done in two directions. First, more behavioral variables regarding credit card use could be incorporated to test whether or not attitude component variables have different effects on them. Second, the number of items measuring credit card attitudes could be reduced so there would be more space in the questionnaire for asking behavioral questions. The attitude statements in this study included 37 items (Xiao, Noring, & Anderson, 1995), and the desired number may be around 10 with the same level of validity and reliability.

Findings have implications for credit education. If the notion holds that different attitudinal components affect different aspects of credit

card behavior, educators may consider different approaches to influence credit card attitudes of college students. If educators are concerned about the over-use of credit cards among college students, the direct and plain "don't use or restrict use" advice will be more effective than long hours of classes about credit information and knowledge. Also an evaluation of the cost of credit, namely interest, could help students develop a negative affective attitude towards credit cards.

If educators believe students would be better off having fewer credit cards, they may use a number of teaching approaches to develop a negative affective attitude toward credit cards among college students. Such a teaching approach could have an employee of a consumer credit counseling agency talk about the problems people have to deal with when they overextend their ability to pay their credit balances and are referred to a credit counseling service. Educators could also use the case study approach. Students could analyze, evaluate, and develop a plan of action to help an individual or family get out of indebtedness due to misuse of credit and credit cards.

Another approach is to have students participate in a survey at the beginning of the credit unit in a consumer economics class. The survey would ask questions such as what ought to be the average number of credit cards a college student should have; how much should one pay each month per card (the entire amount, the minimum, or something in between); cost of interest; reaction to the ease of acquiring credit cards on campus; and consequences if a consumer misuses and mishandles his/her credit. The discussion and debate of the results could help students draw conclusions about credit card use, evaluate overuse of credit and assess whether few or many credit cards would be better.

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