An Empirical Examination of Financial Literacy Message Theme Effectiveness among College Students: Debt or Saving?

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ABSTRACT

Advertising effectiveness research is nothing new; however, its application to financial literacy advocacy advertising messages is a new concept. This study concentrates on financial literacy message effectiveness and whether a message of debt or savings is most effective as an advertising input tested empirically using multiple regression analysis. This study includes testing experimental groups along three consumer dimensions, cognition, affect, and conative. Particular findings of this project show significance among behavioral consumer dimensions when exposed to a financial literacy message (ad) with a theme of savings versus a financial literacy message (ad) with a theme of debt.

INTRODUCTION

The use of credit as an instrument of consumption by college undergraduates has increased significantly in recent years. A centralized theme of credit card use and student loans leading to student financial distress and debt is prevalent in much of the academic research and literature currently published. Dissaving, a condition occurring when expenditures exceed income, results from low income situations such that spending needs can not be met, or high income combined with a high propensity to consume, or unwillingness not to spend (Katona 1975). The college student is targeted by many financial services and credit card firms as research and data have shown this group to be low income while possessing a tolerant attitude towards debt (Davies and Lea 1995). This manuscript is organized as follows: First, a brief review of the literature is presented. The second section of the study describes the data and methodology used. The next section offers results of the study, and the last section concludes and summarizes the study.

LITERATURE REVIEW

In 2001 educational lender Nellie Mae conducted an analysis showing that 83% of undergraduate students attending four-year institutions have at least one credit card (Nellie Mae, 2005). Interestingly enough from the same Nellie Mae analysis it is found that 47% of this age cohort hold four or more credit cards. Joo, Grable and Bagwell (2003), find that this multiple credit card figure has been on the rise reporting that 70% of all undergraduates at four-year institutions have at least one credit card. Concerns such as these have warranted academic research in the areas of student attitudes, behaviors, and feelings toward debt and credit.

Credit comfort within the undergraduate student cohort is also evident with a rise in carrying balance percentages. In 1998, Nellie Mae research found that 14% of this cohort carried a revolving balance from $3000-$7000. The same data show this percentage gained 7% from 1998 to 21% of students carrying a balance of $3000-7000 in 2001. While average debt per student has peaked and declined over this same time period, from $1879 in 1998, $2748 in 2000, and $2327 per student in 2001, respectively. At this same juncture, the percentage of those individuals revolving a balance has increased to 44 per cent in 2004. Henry, Weber, and Yarbrough (2001), reported that students at Universities and Colleges are living on the brink of financial crisis.

Credit comfort, however, does not equate to credit or debt literacy. A recently conducted study, from 1991 and 1999, by noted Harvard Law Professor Elizabeth Warren, states a 51% increase in bankruptcies among people under the age of 25 between further exemplifying the dissavings problem among young people (Hoover 2001). For many students, credit comfort may be based in part on the convenience of using credit cards in an effort to afford the costs of education, i.e., books, tuition costs, etc. As a student progresses through college, the number of credit cards utilized as well as
exposure to credit card access increases. In 2002, Nellie Mae stated that an average college freshman will have 2.5 credit cards and that by graduation that same student will have tripled the number of cards utilized. Credit card balances outstanding account for 34% of the payments students will make upon graduation, even though actual credit balance represents only 16% of total debt owed (Nellie Mae 2005).

The information provided by academics, Nellie Mae, and other organizations is informative, alarming and worthy of further study. Nellie Mae, in conjunction with researchers, and other organizations, feels that financial success among college students rests upon financial literacy and education; and as such, programs and academic studies throughout the United States concerning financial literacy have blossomed in recent years. The National Endowment for Financial Education (NEFE) created The NEFE High School Financial Planning Program (HSFPP) in 1984, targeting high school educators with the goal of teaching students to be wise in consumer choices (NEFE 2004).

In 1999, the Employee Benefit Research Institute (EBRI), in conjunction with the American Savings Education Council (ASEC) and Matthew Greenwald and Associates, Inc. conducted the Youth and Money Survey consisting of a sample of one-thousand students between the ages of 16 and 22 interviewed during January and February of that same year. The respondents were asked questions along financial, money management, real world situations and education categories. The data gathered showed that among those respondents who reported to understand financial matters very well, 64 percent think that they do not know as much about money management as they should. Fifty-four percent of the respondents felt it very important to save money. Twenty-eight percent of respondents with credit cards roll over debt each month. Surprisingly, 65 percent of those individuals offered a course in personal finance did not take it (Youth & Money Survey 1999).

EBRI and ASEC, with assistance of TIAA-CREF, established a literacy messaging campaign to inform and educate young and old Americans alike about the benefits of savings. The campaign was complete with printed media brochures and flyers, downloadable from the Internet, with messages centering around savings themes. The marketing collateral generated by such programs is of questionable appeal to the target demographic. The marketing strategies of some credit card issuers toward the college student can be questionable at best. Academicians and authors have been quick to point to the concerted marketing efforts of credit companies targeting college students as part of the problem leading some students into dissavings and financial disaster. Robert D. Manning, author of the book Credit Card Nation, argues that marketing of credit cards on college campuses is so aggressive that it poses a larger student threat than alcohol or sexually transmitted diseases (Hoover 2001). Hoover (2001) states that marketers of credit cards contend students should be treated as adults and that managing debt is ultimately the student’s responsibility.

The actual proven cause of dissaving and financial dysfunction of many college students may go unknown; however, the methods in which marketers reach this target market are widely known and can be used, conversely, as a healthy vehicle medium to deliver messages of financial literacy. It is no secret that the financial services sector uses marketing theories and market research to aggressively advertise and attract the college segment (Kara, Kaynak, Kucukemiroglu 1994). The idea of utilizing the most effective appeals, media and advertising response models in the delivery of the financial literacy message may ultimately lead to a more efficient marketing vehicle for the dissemination of educational materials to the college student.

Current research needs to be conducted on the most effective message type as targeted to the college student demographic. This work is timely and unique in that efforts of this study will concentrate on the measurement of advertising effectiveness among a sample of college students at a southwestern United States University. While advertising effectiveness research is not a new concept its application to financial literacy messages is; as relatively little to no conceptual or empirical research exists in this area. The purpose of this study is to: empirically test the particular predictive contributions of debt or savings advertising themes (print media) among student cognitive, affective, and behavioral dimensions in an effort to assess the most effective advertising message theme as applied in the financial literacy context.
DATA AND METHODOLOGY

The participants consisted of 195 students, 20 Freshman, 40 Sophomore, 58 Junior, 45 Senior, and 28 graduate students at a southwestern United States university with a student population just under 9,000. Four individual respondents in the survey failed to report grade classification status, and thus were deleted from the analysis providing an overall sample size of 191 respondents. Respondent selection was based on random core courses offered within the university college of business, thus the sample of 191 students reflects an accurate validity level for the larger population (Schmidt, Hunter and Urry 1976).

A survey using a researcher-developed questionnaire was conducted during the Spring semester over a period of 10 days. Individual undergraduate students enrolled in core courses were administered the questionnaires on regular class days. Graduate students were randomized throughout the sample as some courses sampled are stacked component courses whereby graduate students can take the course as a refresher or an elective. The economics, accounting, business law, and marketing core courses from which the sample was drawn represent respondents of differing majors throughout the university, not limited to business degree plans. Respondents are exposed to a questionnaire at the beginning of class, participation was not mandatory.

The final questionnaires were divided into three separate groups, X0, X1, and X2. All questionnaires were A4 paper size six sided front and back, folded in half, and contained basic demographic and socio-economic information, general consumer information, preferred marketing mediums for advertising (ad) information, and three unique advertising awareness sections. Survey X0 respondents received generalized advertising awareness questions. Survey X1 respondents received two separate advertising awareness question scales regarding a debt ad, followed by a savings ad in this manner:

Debt: The Antithesis of Saving. FYI. 76% of undergraduate students attending four-year institutions have at least one credit card. From 1991-99, a 51% increase in bankruptcies among people under the age of 25 were reported. Is this YOU? Act today to ensure a debt free future tomorrow.

Survey X2 respondents also received two separate advertising awareness question scales regarding a savings theme ad followed by a debt themed ad in this manner:

Saving: The Antithesis of Debt. FYI. 64% of individuals age 16-22 do not know as much about money management as they should. Saving your money can help you reduce debt. Is this YOU? Act today to ensure a debt free future tomorrow.

The text ads were created as text only ads, the same for each survey instrument, allowing for the ordering of the sequence between survey instrument X1 and X2 respectively. The questionnaire, on average, took 12-15 minutes to complete.

Construction of Question Scales

An original list of 27 statements was selected for scale construction among the cognitive, affective, and conative advertising awareness dimensions. This list of statements was shown to 15 individuals who rated the statements according to how pro or anti the statements were towards the subject of financial literacy. In effort to create construct validity, a final list of 15 statements, five pertaining to cognition of advertising awareness, five pertaining to affect, or liking and preference, of advertising awareness, and five pertaining to behavior as a result of advertising awareness was presented to the respondents. Two questions were “anti” statements. These scales were tested for reliability and resulted in satisfactory Cronbach’s Alpha of .62, .77, and .75 respectively. Respondents were asked to rate each statement of the three sections on a 5-point Likert scale (1[strongly disagree]-3[neutral]-5[agree strongly]). The remaining 12 questions were included in the final questionnaires as general consumer information questions. The general consumer information scale showed reliability assessment of .632 average measures within intra-class correlation.

Classic psychological modeling divides behavior into three dimensions, cognitive, affective, and conative. Cognition can be thought of as the intellectual, mental or rational states and relates directly to the awareness and knowledge stages of the first of three functions of advertising, awareness and knowledge (Lavidge and Steiner 1961). The second function of advertising, liking and preference, directly relates to the affective component, or the emotional
and feeling states. The third function of advertising, conviction and purchase, according to Lavidge and Steiner, directly relate to the conative or motivational and behavioral component of the classical psychological model. Advertising awareness and message effectiveness refers to the level measured by the sum scale of the scales for the cognitive, affective, and conative dimensions respectively.

Each respective survey group was exposed to 12 questions concerning general information about how the respondent performs marketing tasks. Each statement response was analyzed on a 5-point Likert scale (1[strongly disagree]-3[neutral]-5[agree strongly]). Two unique questions from this area, “I can recall recent marketing information (advertisements) about debt,” and “I can recall recent marketing information (advertisements) about saving money,” were used in the analysis of this paper. Each survey group was exposed to 10 questions concerning appropriate marketing mediums from which to receive general advertising information, i.e., newspaper, Internet, cellular phone, etc. This particular area of the surveys was acquired for future research regarding the appropriate medium for reaching this age cohort. General demographic information was obtained and used in the analysis of this work. Questions ranged from annual income, GPA, credit card use, credit revolving, as well as standard demographic questions.

RESULTS

The study sample was 57.6% male, 74.6% Caucasian, 11.6% Hispanic, 6.9% Asian and Pacific Islander, 1.6% Native American, 1.1% African American, and 4.3% multi-ethnic or other ethnicities. The ethnic composition of this study sample closely represents the student population at the university with 68.1% of respondents over 21 years of age. In the entire sample, 37.2% of respondents reported working 20-40 hours per week on average, 64.4% reported living off campus without guardians, 31.9% of respondents reported annual incomes of greater than $30,000. Respondent academic levels ranged from 10.5% Freshman, 20.9% Sophomore, 30.4% Junior, 23.6% Senior, and 14.7% Graduate. Cumulative Grade Point Averages, GPA’s, reported by the respondents ranged on a four point unified scale from 1.1% below 1.0 GPA, 2.1% 1.1-2.0 GPA, 45% 2.1-3.0 GPA, and 50.3% reporting 3.1-4.0 GPA. Over 60% of the respondents of this survey reported saving money at the end of each month. Respondents of the survey answered 42.4% of the time to no credit card in possession. Of those with credit cards, 57.5% reported having at least one credit card, and 28.2% of respondents revolve a balance from month to month on those credit cards.

The distributions of socio-economic variables were compared for respondents who were exposed to each of the three survey groups, X0, X1, and X2. No significant differences were found. In addition, responses to the cognitive, affective, and conative question scales were examined for data bias due to presentation sequence and order effect. The analysis showed that respondents who were exposed to the debt advertisement theme, survey X1 and those who were exposed to the saving advertisement theme, survey X2, differed in some responses for some advertisements, but the differences were not shown to be systematic.

The research question posed in this project stems from the effectiveness of financial literacy messaging, or basically, which message, savings or debt as a theme impact or predicts the cognitive, affective, and behavioral summed scores criterion between X1 and X2, groups exposed to savings and debt themed messages. The dependent variables, advertising message debt or savings was designed with three categories, cognitive, affective, and behavioral dimensions respectively. The summed scores of each separate level were recoded as a computed summed scale for each total category and entered into the model. Six new independent variables were created as combination variables and utilized as the independent variables in multiple regression analysis. Each combination variable provided the residual difference between total debt advertisement scaled scores and total savings advertisement scaled scores along the cognitive, affective, and behavioral dimensions.

If total debt behavior summed scales subtracted from total savings behavior summed scales is equal to zero, then neither debt nor savings themed messages can be said to have a predictive effect on the behavior total advertisement summed scores. If the residual is positive, then the dummy variable can be said to provide good prediction as a combined variable on the criterion. Multiple regressions were run among total summed scores of cognitive, affective, and behavioral dimensions in the experimental groups, with significance only noted among the behavioral dimension.
Of particular interest to the findings of the multiple regressions are the amounts of predictive influence the theme of the advertisement may have had on the criterion.

Standard enter method multiple regression analysis on the independent predictor variables computed and coded for the cognitive and affective dimensions showed no significance in the model. Along the conative, or behavioral dimensions, significance was found from the independent predictor variable [Total Savings Behavior – Total Debt Behavior] at p<.0005 when regressed on the criterion Behavior Total Ad Score. Adjusted R Square for this model was reported at .368 with a standardized coefficient Beta of .611. In this particular case one can explain 36.8% of the variance in the Behavior Total Ad Score as explained by the predictor variable, a positive value. When the predictor variable is reversed to control for order effect, the model exudes the same significance of the predictor variable [Total Debt Behavior – Total Savings Behavior] at p<.0005 and an adjusted R Square of .368; however the standardized coefficient Beta is -.611. The combination variables show that advertising themes of savings have more predictive impact on the criterion variable than do advertising themes of debt for this respective sample.

IMPLICATIONS AND CONCLUSION

It is with no doubt that modern corporate America utilizes marketing as a tool to create advertising to either persuade or inform in an effort to increase awareness and profits(Lavidge and Steiner 1961). Much literature has been written and many research investigations have been conducted in an effort to the effectiveness of advertising as a marketing tool to create brand equity, however predicting message theme effectiveness is difficult at best. Many advocacy groups have initiated financial literacy advertising awareness campaigns with different themes, such as savings. Cutler and Muehling define advocacy advertising as a special form in which organizations express their opinions on (often controversial) issues in an attempt to sway public sentiment (Cutler and Muehling 1991). With regard to the sample of this study the message theme of ‘savings’ may be on target for the college age cohort.

This study has served to empirically show that the message theme does indeed make a difference in the answers to questions concerning debt and savings among the behavioral dimension of the college student cohort. Advertising effectiveness models are primarily concerned with the conative or behavioral dimension, as this shows the likelihood for conviction and purchase (LaVidge and Steiner 1961). In the particular case of advocacy advertising of financial literacy, a message with a savings theme was shown by this study to be significant in altering or serving as a predictor to the conative, or behavior, response dimension. As policy makers and financial literacy advocates create campaigns in the future, it is important for these individuals to be cognizant of the message theme of savings delivered to the college age cohort.

Future research for this project would entail identifying what type of savings theme message appeals are most effective in attempting to change behavior. Many elements of advertisements could be analyzed for effects, such as colors, copy, placement, content, media scheduling, repetition, etc. The door is open to explore many different components of the framework for studying how advertising in the financial literacy context works. Effective financial literacy advertising models need to be constructed to show the impact a particular theme may have on the consumer marketplace. Advertising inputs should be studied at length to determine effectiveness. Filters should be examined for the effects on motivation, ability and involvement of the consumer in the financial literacy context. More research could be deployed among the cognitive, affective, and conative dimensions.

REFERENCES


