Credit cards and student interest: a financial literacy survey of college students

(Working Paper)

Kelly Lalonde Saint Anselm College

Amy Schmidt Saint Anselm College

ABSTRACT

The purpose of this study is to determine the financial literacy of college students at a small liberal arts college in the Northeastern United States and examine the factors that contribute to financial literacy. The questions used for this survey were obtained with permission from the Jumpstart organization and measure financial knowledge in four areas; Income, Money Management, Savings and Investment and Spending and Debt. This paper presents our results and compares them to the results of previous financial literacy surveys (Chen & Volpe, 1998, 2002; Mandell, 2008; Murphy, 2005). The most significant predictors of financial literacy we find are the number of credit cards a student has and how interested the student is in personal finance. Gender is significant at the 1% level for questions relating to Spending and Debt, but contradictory to previous research, women performed better than men.

Keywords: Financial Literacy, College Students, Young Adults, Personal Finance

INTRODUCTION

Researchers, academics and individuals involved in public policy have recognized the apparent need for financial literacy (Chen & Volpe, 1998; Patterson Lorenzetti, 2007; Supiano, 2008) and lack thereof. A number of organizations including Jumpstart Coalition, 360 Degrees of Financial Literacy and the National Council on Economic Education have emerged to help fill this deficiency. Various surveys have been performed by researchers and not for profit organizations to ascertain the financial literacy of young adults (Chen & Volpe, 1998; Mandell, 2008; Murphy, 2005). Despite the genuine concern and attempts by many organizations (Patterson Lorenzetti, 2007; Supiano, 2008) to increase the financial literacy of young adults in the United States.

Three previous surveys of financial literacy were used to develop our hypotheses. The first survey (Chen & Volpe, 1998) is comprised of 924 students from 13 different campuses. The reported results indicate the following groups scored better than their counterparts: males, students with a higher class rank, and business majors. Investments were the weakest area for the 1998 survey participants. The gender differences found in this survey were further explored in 2002 (Chen & Volpe, 2002). Race was examined closely in the second survey (Murphy, 2005) of 277 students from a predominantly Black institution. Murphy (2005) found gender and age differences in scores, but did not find the differences to be significant. Along with race; major and parental education were found to be significant. In 2008 Jumpstart administered its financial literacy quiz to college students for the first time. The sample was made up of 1,030 full time college students between the ages of 18-23. Higher mean scores were achieved by students with higher parental income, parental education, students who had credit cards, females and students who had taken related college or high school courses (Mandell, 2008).

To ensure a comprehensive evaluation, five dependent variables are used in our analysis (Table 1). Four of the variables identify different areas of financial literacy and the fifth combines all four areas for an overall gauge of it. Descriptive data has been collected, including gender, class standing, college major, credit card use, students' self assessment and interest in personal finance. Our study will not present results based on race due to the homogeneous nature of our sample¹. The following hypotheses will be investigated: Hypothesis 1: Gender will not have an effect on the survey results. Hypothesis 2: Older students, as identified by class standing will have higher scores than younger students. Hypothesis 3: Students with more credit cards will be more financially literate than students without cards or with few cards. Hypothesis 4: Students that major in Business or have taken specific business courses will have a higher degree of financial literacy than other majors. Hypothesis 5: Students who had higher SAT scores will score better than students with lower SAT scores. Hypothesis 6: Self reported interest in personal finance will influence financial literacy scores Hypothesis 7: Students who believe

¹ 95% of the students in the sample are white and all of the students are traditional college students.

they understand personal finance do understand personal finance better than their peers that state they do not understand personal finance.

METHODS

278 students participated in this financial literacy survey, although only 192 answered all questions of interest. All of the students are from a small liberal arts college in the Northeastern United States. The survey was administered online using Key Survey during the fall 2009 semester. Students were sent an email that invited them to participate and they were encouraged to participate by being included in a raffle for tickets to see a professional basketball team to be drawn from all completed surveys. The survey instrument itself was obtained from the Jumpstart coalition. This national organization has been in existence since 1995 and has conducted surveys of high school students every two years. In 2008 Jumpstart surveyed college students for the first time. We obtained permission to use the quiz from the Jumpstart organization. The survey included 57 questions. 31 of the questions were designed to test students' knowledge in four areas: Income; Money Management; Savings and Investments; and Spending and Debt. The remaining 26 questions collected demographic data. SSPS v 16 was used to evaluate the data collected.

Regression analysis is the primary methodology used. There are 5 dependent variables: the students' total score (maximum score is 31), income score (maximum score is 7), money management score (maximum score is 5), savings and investments score (maximum score is 8), and spending and debt score (maximum score is 11). The number of credit cards held by the student is one of our independent variables. We expect that students with more credit cards will score higher on all measures, given their additional financial experience. However, since this variable is endogenous, which is confirmed by a Hausman (Kenndy, 2003) test for endogeneity, 2 Stage Least Squares is used. The initial estimated equations are:

Score_i = $\alpha_0 + \alpha_1$ Male + α_2 ParentInc + α_3 NumCreditCardsPredicted + β ParentEd + γ HSClasses + δ CollegeClasses + η Majors + ζ SelfEval + ε (1)

NumCreditCards = $\kappa_0 + \kappa_1$ ParentInc + θ Class + λ SelfEval + ν (2)

Where the coefficients in bold represent vectors of coefficients and variable names in bold represent several qualitative variables measuring attributes of the students. In equation (1), Score represents each of the 5 dependent variables. We use **CLASSSTANDING**, 3 dummy variables (Freshman is the reference category), to identify the credit card regression equation. By doing this we implicitly hypothesize that class standing influences students' scores through their effect on the number of credit cards in their possession.

Table 1 presents the names, definitions, means and standard deviations of the variables. All of these variables were included in the regressions initially, although most are not included in the final regressions presented in this paper. Two columns of data are given. The first is for all individuals in the sample. The second is for the 192 for whom we have complete data and are included in the regression analysis. There is not a large difference between the two groups. Those included in the regressions are somewhat more male, have slightly better educated parents, are younger, and are slightly more likely to have taken economics in high school. They are less likely to be studying nursing and education. The discussion that follows will focus on the second column.

The average score for the 31 question test is 18.82, or 60.6%. The sample performed the best on questions relating to income, 4.79 questions correct out of 7, (68.4%) and worst on saving and investment questions, 4.16 out of 8,(52%). Money Management and Spending and Debt scores were also dismal, 2.78 out of 5 (55.6%) and 7.09 out of 11 (64.4%) respectively.

Surprisingly our results are not considerably different from the results of previous financial literacy surveys. Our sample consists of students from a small liberal arts college in the Northeastern United States. 95% of the participants are white. Mandell (2008) reported that white students and students attending a 4 year college did better than students at 2 year institutions and African American students. Murphy (2005) as well as Chen & Volpe (1998) found race to be significant. Based on previous results and the demographics of our sample we expected our sample to result in higher percentages of financial literacy than previous surveys. Our mean overall score of 60.6% compares closely to the overall score reported by Mandell (2008) of 61.9% and below the mean for 4 year colleges and white students, 62.6%, 63.3%, respectively. The survey tool used by Chen & Volpe (1998) is different from the tool used in this survey; however, the questions asked are comparable and address personal finance in a similar way to the Jumpstart survey. The 1998 survey found a mean percentage of 52.87%. It does not distinguish between 2 year and 4 year institutions, but does present results based on race. White students had a mean score of 64.89% compared to 56.69% for African American students. It is difficult to compare our results to Murphy (2005) because means were not provided and the survey is not as robust as the others. However, the overwhelming lack of financial literacy, 3 correct questions out of 10, and regression analysis indicating that African American students were less financially literate than white students is consistent with the other studies referenced in this paper. Why did our predominantly white students at a 4 year college fair no better than other young adults in this survey of financial literacy? That is a question that will need to be answered by future research.

The students that completed the survey were 60.4% female and 39.6% male. During the academic year 2009-2010, when the survey was administered, the student population at the college was 58% female and 42% male Their class standings are as follows; freshmen 24.5%, sophomores 20.8%, juniors 26.0% and seniors 28.7%. The highest concentration of majors are Computer Science, Math and Science combined, 30.2% and Business and Economics 29.1%, The next largest is the combination of English, and Nursing, 15.6%, Humanities 9.9%, Fine Arts,

and Modern Languages, 6.3% .The distribution of majors at the college during the semester when the survey was administered compares reasonably with the survey sample. Computer Science, Math and Science combined accounted for 22.8% of the student population, Business and Economics majors represented 21.8%, English, Fine Arts, and Modern languages account for 14.6%, Humanities and Nursing Majors made up 16.7% of the student population. Remaining participants were spread over the other major areas of study available at the college. Business and Economics is the omitted category and we expect the coefficients on the signs of the other majors will be negative indicating that Business and Economics majors score better than other majors.

SAT scores for critical reasoning and math were obtained by asking the students to identify the category their score fell into. The midpoint of that category was assigned to each student as the score. This variable accounts for a number of the incomplete records as students chose, "Don't remember" on the survey. The number unable to recall their score on the written section on the SAT was much greater and led us to drop that variable. We expect that higher critical reasoning and math SATs will result in higher financial literacy scores.

We have 5 variables identifying the types of classes relating to economics and personal finance in high school and 5 more applicable to college. New Hampshire accounts for the 2nd largest contingent of students at our college. This state requires a semester of economics for high school graduation. In our college curriculum Business and Economics majors usually take Principles of Macro and Microeconomics in their first two semesters and take financial accounting in their third or fourth semester. One third of our sample has taken a college course in economics and almost 30% have taken an economics course in high school. The reference category for both of these groups is not taking any such course. We expect that taking courses in economics, personal finance or accounting will improve financial literacy scores. These categories are not mutually exclusive.

There are 4 variables that measure a student's interest, comfort level, self-assessed understanding and willingness to try to learn more. For each of these questions students were asked to identify on a five point scale how they felt about statements regarding each of the above qualities (see the quotes on Table 2a). We did not know what to expect the signs on the coefficients of these variables to be. Do students who believe they understand personal finance actually understand personal finance? Holding self-assessed understanding constant, will a student who feels more comfortable discussing these issues score better? A similar question can be asked regarding a student's willingness to learn more, holding understanding and interest constant.

RESULTS

As stated earlier, our aim is to understand the causes of the variation in scores from one individual to another and there is a good deal of variation in the independent variables judging by the standard deviations relative to the means.

We started with all of the independent variables in Table 1^2 and estimated equation (2) and then equation (1). We used a series of F-tests to determine whether groups of independent variables, such as students' majors, could be excluded from the regression. 10% was the threshold level of significance for deciding whether the group of variables should be included or excluded. The final results are presented in tables 2a and 2b.

2b shows the results for the equation generating the predicted value of the number of credit cards. The class standing of juniors and seniors are both significant at the 1% level. A junior has .616 more credit cards than a freshman; and a senior isn't very different with .641 more credit cards than a freshman. Sophomores do not possess a significantly different number of credit cards than a freshman. Our model has class standing affecting test scores through its impact on the number of credit cards. It was expected that students whose parents have a higher income would be more likely to have children with credit cards, but this variable is insignificant. The self evaluations questions are individually insignificant, but as a group could not be excluded.³

Table 2a shows the final regressions for each of the dependent variables.

Gender

The results of the previous financial literacy surveys discussed in the Introduction with the exception of Mandell (2008), all found women to be less financially literate than men. Chen & Volpe (2002) found that there was statistical significance due to gender after controlling for other factors. A separate study conducted in 2007 examined the relationship between gender and financial literacy in the context of Social Constructivism (Danes & Haberman, 2007). The researchers investigated how students participating in the study of financial planning differed based on their gender. The female study participants experienced a more significant increase in financial knowledge as a result of the curriculum than the male participants. Since women have been outperforming men on college campuses for a number of years and they take advantage of the personal finance curriculum when it is presented to them (Grabmeier, 2006; Lwein, July 9, 2006) we expected women to perform as well on this financial literacy quiz as men. Although being Male has a negative coefficient for all dependent variables it is only significant in the Spending and Debt equation. This one results contradicts the findings of other studies. The coefficient -.851 translates to a 7.74 percentage point lower score for men in the Spending and Debt section.

Credit Cards and Class Standing

² Except for those variables regarding the handling of credit card payments and debts, since this is relevant for only those students holding credit cards or debt.

³ An F-test indicated that both variables, ParentTaught and Interested could be excluded. Parent taught and Parent Income are highly correlated.

There are 118 students who have at least one credit card. Since we expected those with more cards to have higher literacy scores, we performed one tailed tests for significance.⁴ The coefficients in the Total Score and the Spending and Debt Score regressions are significant at the 5% level and are significant at the 10% level in the remaining regression. Credit Cards have the largest effect on total score. If the number of credit cards goes up by 1 the total score rises by 2.712 points, translating to an 8.74 percentage point increase in percentage correct. (1 point out of 31 adds 3.2 percentage points to the score). This result was expected; Mandell (2008) also found students with credit cards had higher scores. We estimated another regression equation on Total Score only for those who had credit cards and answered follow up questions about their credit card behavior. We found that variables that measured whether students paid off their balance in full, always paid their bill(s) on time, and the size of their balance had no significant effect on their Total Score. Students, who paid their bills late, carried a balance and had balances over \$1,000 did not score differently than students who paid their bills on time, generally paid off their balances each month and carried balances under \$1,000.

Our results confirm previous findings that age does play a role in financial literacy (Chen & Volpe, 1998, 2002; Mandell, 2008; Murphy, 2005). Table 2a presents our results which indicate students with higher class rank have more credit cards. Based on these results our hypothesis that class rank will significantly affect scores, although numerically, has been supported. The difference between a Senior and Freshman as a result of the effect of the number of cards is ((.641x2.741/31) x 100) 5.67 percentage points.

Major, Coursework, and SAT Scores

Previous research has found that business majors perform better on surveys of financial literacy than non business majors (Chen & Volpe, 1998; Murphy 2005). An F-Test indicates that major doesn't affect financial literacy. Similarly, having economics or business courses in high school or college has no effect on scores. This is consistent with Mandell (2008) who proposed that academic prowess and interest (Mandell & Klein, 2007), not coursework, would determine financial literacy.

Self reported SAT scores were used as a gauge of academic ability. We find that only the critical reasoning score on the SAT is a significant predictor of the test score. Though significant the impact is small. A 100 point increase in the critical reasoning score increases the test score by .8 points or 2.56 percentage points.

Student Interest in Financial Literacy

The most significant predictor of financial literacy in our survey is student interest. For each point increase in agreement in the statement, the student's score increases by 1.640 points.

⁴ A quadratic term the predicted number of credit cards was also included in earlier regression, but the coefficient had a t-statistic below 1.

A student who strongly disagrees compared to a student who strongly agrees that he is interested will have a score that is 20.99 percentage points lower $((5-1) \times 3.2 \times 1.640)$! This finding supports the research that indicates motivation is one of the most important indicators of financial literacy in young adults (Mandell & Klein, 2007). Our results indicate that students are aware of their financial literacy or lack thereof.

Students who strongly agree that they understand personal finance score better than those who strongly disagree by 11.58 percentage points. On the other hand feeling comfortable conversing is no guarantee that one will score higher. In fact, it is associated with lower test scores by as much as 11.79%.

A student who is willing to try to learn more about personal finance appears to need to learn more. The score is lower by 1.163 points for each increase in the 5 point scale. A student who strongly agrees that he will try to learn more will have a score 14.88 percentage points lower than the student who strongly disagrees with the statement.

Summary Results

Consistent with previous literature (Chen & Volpe, 1998, 2002; Mandell, 2008; Murphy, 2005) we find that class rank, as indicated by its impact on the number of credit cards, and motivation (Mandell & Klein, 2007), as measured by interest in personal finance, are the most significant predictors of financial literacy in this survey. Our results contradict the results of previous surveys related to gender and personal financial literacy (Chen & Volpe, 1998, 2002; Danes & Haberman, 2007; Murphy, 2005) that have consistently indicated men have a higher level of literacy related to personal finance than women.

A number of independent variables; parental income, education, and most specific coursework at the high school and college level, did not turn out to be significant in our analysis. Intuitively we expected each of these variables to have a positive effect on the score. Mandell 2008 found parental income and educations were positively related to financial literacy, Murphy (2005) proposed the following analysis related to parental income:

The relationship between financial literacy and education is interesting. Some research suggests that more affluent parents shield their children from the financial realities of life; this leads to lower levels of financial literacy than their less prosperous counterparts (Mandell, 1999). Other research proposes that students from more affluent households are more likely to have exposure to information on savings and investments, so that their financial literacy tends to be higher than less prosperous others (Tennyson, 2001).

The fact that specific coursework and choice of major did not produce a statistically significant result is at first disconcerting. Curriculum changes would seem a reasonable way to begin to address the issue of financial literacy. Based on our research we cannot conclude that coursework alone will help solve the problem. However, since motivated and interested students do better on tests of financial literacy it would seem the first step toward helping students

become more financially literate would be to increase their interest in, and motivation to learn the subject matter. Determining exactly how to increase student motivation is beyond the scope of this study and provides an opportunity for further research.

LIMITATIONS OF THE SURVEY

The limitations of our study are a small sample size (192), and the use of a tool that could not be altered. We chose to use the Jumpstart survey because it has been used since the mid 1990's and measures the main areas of financial literacy: Income, Money Management, Savings and Investments, and Spending and Debt. In order to obtain permission to use the survey we agreed not to change anything about the 31 financial literacy questions. In light of the housing bubble and the recent financial crisis we would have preferred to alter some of the questions. The way students answered Question 11 about the long term growth prospects of different investments could have been influenced by the recent financial crisis. Question 4 asks: what is the best way to protect the purchasing power of a family's savings? The correct answer is a house with a fixed rate mortgage. Over 50% of the students got this question correct despite the fact that the housing bubble might cause them to answer that question differently. Question 17 about health insurance could have been a question of concern if the survey was taken after the Health Care bill was passed but since the survey was taken in the fall 2009 semester the effects of the bill need not be considered when interpreting the results of this survey. Questions 31, 11, and 4 are presented in Table 3. According to the Jumpstart website the 2010 survey will be a new version developed by learning Point Associates, an independent not for profit research firm, who will use the results and work of the last six surveys to create version 2.

ACKNOWLEDGEMENTS

A sincere thank you for the support we received from the Institutional Research Board and members of the Economics and Business Department especially to Dr. Thomas Fitzpatrick who initiated this project. We would also like to acknowledge Key Survey for letting us participate in their generous academic sponsorship program and the Jump Start organization for allowing us the use of their financial literacy survey.

Table 1					
	Descriptive Statistics				
	(Standard Deviati	on in Parentheses)			
Variable	Definition	Sample with Reported	Complete		
		SAT	Observations		
		(n is variable)	(n=192)		
IncScore7	# correct of 7	4.75	4.79 [68.4%]		
	questions re: income	(1.57) n=258	(1.59)		
MnyMgtScore5	# correct of 5	2.75	2.78 [55.6%]		

	questions re: money management	(1.31) n=257	(1.31)
questions re: savings and investment		4.24 (1.53) n=257	4.16 [52.0%] (1.52)
SpndDebt11 # correct of 11 questions re: spending and debt		7.04 (2.15) n=257	7.09 [64.4%] (2.14)
TotalScore	# correct of all 31 financial questions	18.78 (5.10) n=257	18.82 [60.6%] (5.09)
Male	1 if male	.378 (.486) n=275	.396 (.490)
ParentInc	Parents' combined income in dollars. A quantitative variable created from a categorical variable.	88612 (44887) n=250	88341 (45431)
ParentHS	1 if highest level of parents' education is a HS diploma. (reference group; no observations less than HS diploma)	.130 (.336) n=278	.125 (.332)
ParentSColl	1 if highest level of Parent's education is some college	.248 (.433) n=278	.255 (.437)
ParentColl	1 if highest level of parents' education is a BA/BS or higher	.604 (.490) n=278	.620 (.487)
Fresh	1 if a Freshman (reference group)	.216 (.436) n=278	.245 (.431)
Soph	1 if a Sophomore	.194 (.396) n=278	.208 (.407)
Junior	1 if a Junior	.281 (.450) n=278	.260 (.440)
Senior	1 if a Senior	.295 (.457) n=278	.287 (.453)
SATCR	SAT Critical Reading score. A quantitative variable created from a categorical variable.	596.67 (98.20) n=225	597.40 (100.22)
SATM	SAT Math score. A quantitative variable created from a categorical variable.	580.13 (122.15) n=229	581.25 (120.91)
HSFinPortion	1 if took a class that	.170	.172

	covered a personal	(.377) n=229	(.378)
	finance topic in HS.		`````
HSFin	1 if took a personal	.151	.099
	finance class in HS	(.359) n=278	(.299)
HSEconPortion	1 if took a class that	.166	.188
	covered an economics	(.372) n=278	(.391)
	topic in HS.		
HSStkGame	1 if took a class where	.252	.260
	a stock market game	(.435) n=278	(.440)
	was played in HS.		
HSEcon	1 if took an	.284	.297
	economics class in	(.452) n=278	(.458)
	HS.		
CollPersFin	1 if took a personal	.101	.099
	finance course in	(.302) n=278	(.299)
	college.		
CollEcon	1 if took an	.342	.333
	economics course in	(.475) n=278	(.472)
	college.		
CollFin	1 if took a finance	.122	.115
	course in college.	(.328) n=278	(.319)
CollAcct	1 if took an	.252	.229
	accounting course in	(.435) n=278	(.421)
	college		
CollPerFinPortion	1 if took a course that	.173	.182
	covered a personal	(.379) n=278	(.387)
	finance topic.		
BusEcon	1 if an economics or	.292	.291
	business major.	(.455) n=274	(.456)
	(reference category)		
CompMathSci	1 if a computer	.204	.302
	science, math or	(.404) n=274	(.460)
	science major.		
CrimJust	1 if a criminal justice	.095	.109
	major.	(.294) n=274	(.313)
Humanities	1 if a humanities	.099	.099
	major.	(.299)	(.299)
EngFAML	1 if an English, fine	.062	.063
-	arts or modern	(.242) n=274	(.243)
	language major.		
Nursing	1 if a nursing major	.168	.156
-		(.374) n=274	(.364)
Educ	1 if pursuing an	.018	.037
	education certificate.	(.134) n=274	(.188)
Undecided	1 if the student has	.062	.063
	not declared a major.	(.242)	(.243)

NumCC(predicted)	Number of credit	.720	.662
	cards	(.100) n=278	(.935)
CCBal	1 if more than \$1000	.040	
	credit card balances.	(.196) n=126	
LateCC	1 if has had a late	.024	
	payment on a credit	(.152) n=127	
	card more than once.		
NoPayoffCC	1 if he/she does not	.170	
-	pay off the credit card	(.377) n=118	
	balance every month.		
SvgsAcct	1 if has a savings	.892	.901
C	account.	(.311) n=278	(.299)
USBonds	1 if holds US bonds	.133	.120
		(.340) n=278	(.326)
Bonds	1 if holds corporate	.291	.302
	bonds	(.455)	(.460)
Understands	1-5 scale from	3.15	3.24
	strongly disagree to	(1.05) n=274	(1.02)
	strongly agree with	(()
	the statement "I		
	understand personal		
	finance."		
Comfortable	1-5 scale from	3.31	3.35
	strongly disagree to	(1.09) n=274	(1.02)
	strongly agree with	(110)) 11 27 1	(1.0-)
	the statement, "I am		
	comfortable		
	discussing personal		
	finance."		
WillTry	1-5 scale from	3.68	3.68
	strongly disagree to	(1.03) n=274	(1.03)
	strongly agree with	(100) 11 27 1	(1.00)
	the statement, "I will		
	try to learn more		
	about personal		
	finance."		
ParentsTaught	1-5 scale from	3.51	3.59
1 01 01105 1 000 810	strongly disagree to	(1.01) n=274	(.966)
	strongly agree with	(
	the statement, "My		
		1	
	parents taught be		
	parents taught be about personal		
Interested	parents taught be about personal finance."	3.46	3 48
Interested	parents taught be about personal	3.46 (1.10) n=274	3.48 (1.07)

the statement, I am interested in personal	
finance.	

	Table 2a					
	2SLS Regression Results					
	(abso	lute value of t-	statistics in parenth	neses)		
	Total Score	IncScore7	MnyMgtScore5	SvgsInvScore8	SpndDebt11	
Constant	11.45***	3.339***	1.598**	2.11**	4.348***	
	(4.09)	(3.69)	(2.14)	(2.50)	(3.64)	
NumCCPred	2.712**	.555*	.456*	.596*	1.105**	
	(2.20)	(1.37)	(1.39)	(1.60)	(2.10)	
Male	-1.171	266	216	.162	851***	
	(1.63)	(1.13)	(1.13)	(.75)	(2.77)	
Understands	.905**	.091	.176	.386**	.352	
	(1.99)	(.61)	(1.45)	(2.50)	(1.51)	
Comfortable	921*	068	151	344**	358*	
	(1.99)	(.45)	(1.22)	(2.46)	(1.81)	
Interested	1.640***	.382***	.337***	.361***	.532***	
	(4.08)	(2.95)	(3.20)	(3.03)	(3.16)	
WillTry	-1.163***	167	234**	336***	426**	
	(2.84)	(1.25)	(2.15)	(2.72)	(2.44)	
SATCR	.008**	.002*	.002	.001	.003**	
	(2.06)	(1.29)	(1.56)	(1.26)	(2.10)	
SATM	.000	001	001	.001	.001	
	(.133)	(.98)	(.719)	(.36)	(.55)	
Adj-R ²	.132	.044	.059	.109	.107	
n	192	192	192	192	192	
*sig. at the 109	% level; **sig. a	t the 5% level;	***sig. at the 1%	level		

		Table	2b			
]	Regression Results	s Used to Gener	ate Predicted Va	lues of NumCC		
	(absolu	te value of t-stat	istics in parenthe	eses)		
Constant	618*					
	(1.89)					
ParentInc	6.7×10^{-7}					
	(.483)					
Understands	.103					
	(1.25)					
Comfortable	.066					
	(.83)					
WillTry	.089					

	(1.47)				
Soph	.153				
	(.79)				
Junior	.616***				
	(3.38)				
Senior	.641***				
	(3.63)				
Adj-R ²	.092				
n	249				
*sig. at the 10%	*sig. at the 10% level; **sig. at the 5% level; ***sig. at the 1% level				

Table 3

Results of how students participating in this survey answered selected questions compared to the results of students tested by Jumpstart in 2008

11. Kelly and Pete just had a baby. They received money as baby gifts and want to put it away for the baby's education. Which of the following tends to have the highest growth over periods of time as long as 18 years?

	Jumpstart	2009 Survey
a. A U.S. Govt. savings bond	61.9%	63.5%
b. A savings account	17.0%	13.3%
c. A checking account	2.0%	4.6%
d. Stocks*	19.2%	18.6%

31. If you had a savings account at a bank, which of the following would be correct concerning the interest that you would earn on this account?

a.	Sales tax may be charged on the interest that you earn.	Jumpstart 10.4%	2009 Survey 7.4%
b.	You cannot earn interest until you pass your 18th		
	birthday.	3.4%	10.9%
c.	Earnings from savings account interest may not be		
	taxed.	47.1%	45.3%
d.	Income tax may be charged on the interest if your		
	income is high enough.*	39.0%	36.3%

4. Which of the following types of investment would best protect the purchasing power of a family's savings in the event of a sudden increase in inflation?

	Jumpstart	2009 Survey
a. A twenty-five year corporate bond	11.1%	11.8%
b. A house financed with a fixed-rate mortgage*	39.9%	54.4%
c. A 10-year bond issued by a corporation	12.0%	12.2%
d. A certificate of deposit at a bank	37.0%	21.7%

REFERANCES

- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, 7(2), 107-128.
- Chen, H., & Volpe, R. P. (2002). Gender Differences in Personal Financial Literacy Among College Students. *Financial Services Review*, 11(3), 289-307.
- Danes, S. M., & Haberman, H. R. (2007). Teen Financial Knowledge, Self Efficacy, and Behavior: A Gendered View. Association for Financial Counseling and Planning Education, 18(2), 48-60.
- Grabmeier, J. (2006). Better Grades and Greater Incentives Help Explain Why Women Outpace men in College Degrees. Retrieved August 17, 2010, from Ohio State Research: http://researchnews.osu.edu/archive/womcolge.htm
- Kenndy, P. (2003). A Guide to Econometrics (5 ed.). Cambridge MA: MIT Press.
- Lwein, T. (July 9, 2006). At Colleges, Women Are Leaving Men in the Dust. New York Times. Retrieved August 17, 2010, from http://www.uri.edu/artsci/ecn/starkey/201-590 bulletinboard/male education gap.pdf
- Mandell, L. (1999). Our Vulnerable Youth: The financial literacy of American 12th graders a failure by any measurement. *Credit Union Magazine*, *65*(1), 4a.
- Mandell, L. (2008). The Financial Literacy of Young Adults. Retrieved April 20, 2009, from http://www.jumpstart.org/survey.html
- Mandell, L., & Klein, L. S. (2007). Motivation and financial literacy. *Financial Services Review*, *16*, 105-116.
- Murphy, A. J. (2005). Money, Money, Money: An Exploratory Study on the Financial Literacy of Black College Students. *College Student Journal, 39*(3), 478-488.
- Patterson Lorenzetti, J. (2007). Developing a Financial Literacy Program at Suffolk University Law School. *Recruitment & Retention in Higher Education, 21*(11), 4-6.
- Supiano, B. (2008). For Students, the New Kind of Literacy Is Financial College offer programs in managing money. *Chronicle of Higher Education*, *55*(2), A1-A38.
- Tennyson, S., & Nguyen, C. (2001). State curriculum mandates and student knowledge of personal finance. *The Journal of Consumer Affairs, 35*(21), 241-262.