The Differences in Students' Financial Literacy based on Financial Education

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Abstract

This paper examines the differences in Financial Literacy among Albanian university students based on their financial education. The main objectives of this study are: i) firstly, to assess the level of financial knowledge, financial attitude and financial behaviour, and to make relevant comparison based on students financial education; ii) secondly, to evaluate an overall score of financial literacy and to investigate its difference among students who are financially educated and their counterparts; iii) finally, to provide some conclusions and policy implications with regard to financial literacy. A total of 607 students from five public and three private universities in Albania participated in this research. The outcome shows that student's financial behaviour does not differ based on their financial education. In addition, non-financially educated students appear to demonstrate better financial behaviour. Finally, students who have taken a personal financial course are shown to be more knowledgeable and financially literate than their counterparts. This study paves the way for future research in Albania.

Keywords: financial literacy; financial education; personal financial course

Introduction

Financial literacy is becoming increasingly important for individuals operating in this complex financial landscape. People must decide on short-term savings and borrowing for paying bills on time, for mortgage payment, for their vacancies, and also for medical and insurance expenditures. In addition, they must plan for long-term investments such as putting money aside for a rainy day, for retirement and for their children education.

Unfortunately, studies have shown that individuals have insufficient capability of personal finances. Many researchers investigated financial literacy in universities (Anthens, 2004; Murphy, 2005; Godfrey, 2006; Bakken, 1967, Langreher 1979) and continued to report that university students generally have low levels of financial literacy. They fail to make sound decisions because they have not received a sound personal financial education (Hira et al., 1993).

This paper aims to investigate the differences in financial literacy among Albanian students who have taken a personal financial course and their counterparts.

Research Methodology

This study uses a comprehensive survey designed in two parts. The first part comprises 29 questions, including 34 items, covering the main components of financial literacy (financial attitude, financial behavior, and financial knowledge). The financial attitude is measured based on 11 items regarding students' perception of money and finances. Participants are asked to rate the importance of different items using Likert scale ranging from 1 – not important, 2-somewhat important, 3-not sure, 4-somewhat important, 5-very important. The financial behavior consists of 8 items. Participants are asked to rate items using a scale of 1-5 (1-not at all true of me, to 5-very true of me). The financial knowledge covers 23 items on general financial knowledge, investment and saving, borrowing and insurance. In the second part, students provide personal characteristics.

Data are collected using a stratified sampling method at five public and three private universities across Albania. Professors from universities are asked to invite students to participate in our study. Participants in this study are last-year bachelor and master university students, aged mainly 18-30 years old. There is also a wide range of majors represented from human development to science, medical and business. A group administered technique is used as the data collection method. Students are asked to complete the questionnaire during class time. The survey instrument was voluntary and anonymous. The validity and clarity of the survey questions are primarily evaluated by experts knowledgeable in personal finance, are improved by conducting a pilot study and tested by utilizing the reliability analysis.

Data Analysis

The purpose of this study is to investigate the financial literacy difference among Albanian university students based on their financial education. Financial literacy includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that effect everyday financial decisions, including events in general economy. Considering and categorizing the core of these definitions into this study, financial literacy will contain three components, financial attitude, financial behavior and financial knowledge (Vitt et al., 2000 p.xii).

Data analysis is conducted considering the existing literature about the influence of financial education on students' financial literacy and the lack existing in this field in the Albanian context. Hence, an informal study of public universities in the state of

Florida regarding personal finance courses (Mc Kenzie., 2007) revealed that 80% of the institutions offered a personal financial course. This study found that students, who attended a personal finance course, were more knowledgeable about their personal finances in comparison with those who did not.

Mandell et al., (2004) identified the paradox existing between the efficacy of education in improving financial literacy and the impact of education on short and long term financial behavior. They studied the relationship between financial literacy education and financial decision making, using a matched sample design comprises of 400 high school students half of whom took a personal financial management course. Authors made use of a questionnaire partitioned in three sections: i) current level of financial literacy, ii) financial behavior and risk attitude, and iii) demographic questions. Results demonstrated that those who took the course were no more financially literate than those who had not. In addition, it raises serious questions about the longer term effectiveness of high school financial literacy courses.

Markovich and De Vanie (1997) surveyed 236 randomly selected undergraduate seniors from one university to assess financial knowledge and behavior. They utilized a questionnaire comprises of 34 items. They similarly revealed that the overall financial knowledge of seniors was low and that there was little difference between the colleges majors represented, although business scored the highest knowledge scores. They also found that students should attend a personal finance course and will help them financially.

- *Problem Statement*

Despite the large body of literature studying financial literacy, there is still a lack of understanding financial literacy behavior among Albanian students. Few studies have been undertaken on measuring financial literacy on national level. The OECD International Network on Financial Education (INFE) conducted a survey to capture financial literacy in 14 countries, including Albania. They developed a survey instrument comprising financial behavior, knowledge and attitude questions and as well socio-demographic characteristics. They found Albania to be ranked as one of the lowest financial literate countries. It was found that Albania has a relatively large proportion of the population scoring between 0 and 2 in the financial knowledge component, although it shows positive financial attitudes. Furthermore, this study indicate that according to the overall financial literacy score Albania is ranked in the tenth place in a total of 14 countries. This study falls into the "one size fits all" problem, since it is not targeted to a particular segment of population. A "one size fits all" measure overlooks particular strengths in certain stages of the life cycle, thereby attributing falsely poor "financial literacy scores" to certain demographics (Angelo et al., 2011). They also highlights that surveys should be tailored to suit different demographics, just as financial education should be suited to specific needs of different demographics.

This study investigates the level of financial literacy among financially educated and non-educated students and it is focused only on university students in Albania. This research will be useful in order to identify any financial education lack among non-financially educated students. Without adequate knowledge students are more likely to make mistakes in the real world.

- *Research Questions*

Two main research questions help to address the purpose of the study:

1. *Are there differences in financial knowledge, attitude, and behavior based on academic financial education?*
2. *Are financially educated students more financially literate in comparison with their counterpart?*

- *Data Preparation*

The data analysis process for this research study is conducted in two phases. In the first phase, data preparation, the data are cleaned and organized and tested for analysis. The data from the survey are downloaded to SPSS version 20, and further are cleaned by removing 30 incomplete surveys leaving in total 607 surveys for analysis. Data are coded according to the respective question and section. The financial attitude mean score is created using questions 1, and 2. These questions are coded on a Likert-type scale of 1-5. For question 1 (How sure do you feel about your ability to manage your own finances) there were five answers (1 = not sure at all, 2 = not too sure, 3=not sure, 4=somewhat sure, and 5= very sure). Question 2 has 10 items (a-h; for example, rate the importance of spending less than your income) and 5 possible answers (1=completely disagree, 2= disagree, 3=neutral, 4=agree, 5= completely agree), coded 1-5 to match their answer. In order to provide a score for financial attitude, and to include this measure into an overall score of financial literacy, it is counted 1 point for respondents who put themselves at 4 or 5 on the scale and 0 in all other cases.

The financial behavior mean score is created using questions 3, 4, and 5. These questions are coded on a Likert-type scale of 1-5. Question 3 is used a scale of 1-5 asking about being either thrifty or spending-oriented. Question 5 has 6 items (a-e; for example, before I buy something, I carefully consider whether I can afford it), which is used a scale of 1-5 (1 = not at all true of me and 5 = very true of me). In order to provide a score for financial behavior, and to incorporate this measure into an overall score of financial literacy, it is assigned 1 point for respondents who put themselves at 4 or 5 on the scale and 0 in all other cases.

For the financial knowledge questions (6-29), incorrect answers are coded as 0 and correct answers were coded as 1. Financial knowledge is tested in four main areas:

general knowledge, saving and investments, insurance and borrowing. A financial knowledge sum score is also created for each student.

The financial education variable is measured by considering in the survey the question whether the participant has taken or not any personal financial or money management course. It is coded as 1 if the answer is yes and 2 otherwise. Other personal characteristics of gender, region, age, academic status, and income are used, in order to create a sample profile.

- *Validity and Consistency of the Instrument*

The validity of an instrument is how well the instrument measures what it is supposed to measure (Crocker & Algina, 1986). To remove systematic error and improve the content and face validity of the survey, we used two experts to independently assess the items. These experts have expertise in financial management. They were asked to provide feedback on whether the instrument was appropriate to measure financial literacy in the Albanian context. After incorporating the feedback from these experts, the clarity and readability of the instrument is tested and refined further by conducting a pilot study with a group of 30 participants. The participants are asked about the clarity of questions and survey items, difficulties in filling out the survey, the length of the completion time of the survey, if there were any technical errors or problems, and if any questions were not understandable. The suggestions, comments and critics from these participants are evaluated and included into the final survey questionnaire..

Reliability is the extent to which an instrument is consistent in its measurement over time and across situations (Crocker & Algina, 1986). In other words, if someone were to take the survey various times, the individual's score should be relatively the same with little variation. Systematic and random error can make scores unreliable. A high reliability coefficient signifies that there is consistency of exam scores but it does not signify the test measured the construct correctly. Thus, an instrument can be reliable without being valid, but it cannot be valid unless it is reliable (Pedhazur & Schmelkin, 1991).

The reliability of this survey is assessed by making use of the Cronbach's Alpha coefficient. This tool is useful to measure the reliability and consistency of the subscales and of the overall survey. A reliability coefficient of 0.70 or higher is considered "acceptable" (Cavana et al., 2001). Table 1 provides information about the statistics of the Cronbach's Alpha coefficients for the financial attitude, behavior and knowledge sections, and also for the overall survey.

Table 1: Reliability Analysis

Subscales	α	№ of items
Financial Attitude	0.701	11
Financial Behavior	0.717	8
Financial Knowledge	0.704	15
Overall survey	0.766	34

The reliability for the financial attitudes section (questions 1 and 2) is 0.701. The reliability for the financial behavior section (questions 3, 4 and 5) is 0.717. The reliability for the financial knowledge section of the survey (questions 6-17) stands at 0.704. The reliability for the overall survey accounts for 0.766. The statistics demonstrates a moderately high internal consistency of every subscale and of the overall questionnaire, since all the Cronbach's Alpha coefficients stands above the threshold of 0.7.

- *Analysis by Research Question*

The second data analysis phase consists of analyzing the cleaned and coded data using the SPSS verse 20 program. In all significance tests, 0.05 is the minimum criterion used. Results from these statistical analyses are presented in section results.

Question One: Are there differences in financial knowledge, attitude and behavior based on financial education, is analyzed by creating a separately score for financial knowledge, financial behavior and financial attitude. F-test and Welch's variance-weighted Analysis of Variance (ANOVA) is utilized to find mean differences between groups.

Question Two: Are financially educated students more financially literate in comparison with their counterpart is analyzed by incorporating all 34 items of the survey in an overall financial literacy mean score. F-Tests and Welch's variance-weighted Analysis of Variance (ANOVA) are used to find mean differences in financial literacy between the two groups.

Results

- *Description of the sample*

There were 607 usable responses collected, representing a response rate of 96%. In terms of financial education 476, students who have taken a personal finance or money management course accounts for 78.4% of the sample, and those who have not received any financial education stands for 21.6%. Table 2 provides information about the sample profile.

Table 2: Descriptive Analysis

	Frequency	Percentage
A. EDUCATION		
1. Personal financial course	**607**	**100%**
a) Yes	476	78.40%
b) No	131	21.60%
2. Academic Status	**607**	**100%**
a) Bachelor	421	69.36%
b) Master	186	30.64%
3. Academic Disciplines	**607**	**100%**
a) Business	429	70.68%
b) Non business	178	29.32%
B. OTHER CHARACTERISTICS		
1. Gender	**607**	**100%**
a) Female	431	71%
b) Male	176	29%
2. Years of Age	**606**	**99.80%**
a) 18 to 22	439	72.40%
b) 23 to 29	126	20.80%
c) 30 and over	41	6..8%
3. Work Experience	**607**	**100%**
a) None	291	47.90%
b) Less than two years	137	22.60%
c) Two to less than four years	78	12.90%
d) Four to less than six years	40	6.60%
e) Six years or more	56	9.20%
4, Family Income	**579**	**95.40%**
a) 0 – 20,000 leke	62	10.20%
b) 20,000 – 40,000 leke	154	25.40%
c) 40,000 – 60,000 leke	144	23.70%
d) 60,000 – 80,000 leke	118	19.40%
e) More than 80,000 leke	101	16.60%
5. Region	**604**	**99.50%**
a) North	67	11%
b) South	164	27%
c) East	21	3.50%
d) West	37	6.10%
e) Middle Albania	315	51.90%
6. Pagesa e studimeve	**603**	**99.30%**
a) Self	120	19.80%
b) Family	374	61.60%
c) Mostly self	31	5.10%
d) Mostly family	44	7.20%
e) 50% self, 50% family	29	4.80%
f) Other	5	0.80%

Almost thirty-percent of the participants (n=176) identified themselves as male. Seventy percent of the participants (n=431) identified themselves as female. A majority of participants, 51.9%, (n=604) identified themselves from the Middle Albania, 11% (n=67) from North, 27.2% (n=164) from South, 3.5% (n=21) from East, and the last 6.1% (n=37) from the Western Albania. This sample is representative of the overall population at the eight universities. A majority of the participants, 72.4% (n=439) were between the ages of 18 and 22. Other age ranges and participant percentages were: 20.8% (n=126) between 23 and 29, and 6.8% (n=41) 30 and over. For academic rankings 69.36% (n=421) indicated they were last-year bachelor and 30.64% (n=186) were master's students. 70.68% (n=429) studied business major and 29.32% (n=178) studied non-business major. The majority of participants 47.9% (n=291) had no work experience. Family income was relatively low with 25.4% (n=154) of the participants reporting more than 20,000 Leke and less than 40,000 Leke. 10.2% percent (n=62) reported a family income of 20,000 Leke or less. Almost 23.7% (n=144) of participants indicated a monthly family income of more than 40,000 Leke and less than 60,000 Leke, 19.4% of 60,000 Leke-80,000Leke, and only 16.6 reported more than 80,000 Leke. University expenses were handled fully by 19.8% (n=120) of the participants while 61.6% (n=374) had school paid fully by parents.

Not all of the demographic characteristics of the sample, summarized in Table 2, are used in the analysis, but are included here to provide a better picture of the sample.

- *Differences in financial knowledge, attitude and behavior based on students' financial education*

Question one: Are there differences in financial knowledge, attitude, and behavior based on academic financial education?

Table 3 provides information about the descriptive statistics of the ANOVA analysis. Results demonstrate that students who have not taken a personal financial course scored in the financial behavior component almost the same (M=4.91) in comparison with their counterparts (M=4.9).

Table 3: ANOVA Analysis for Financial Behavior, Attitude and Knowledge

		Mean	Std. Deviation	F	Sig.
Financial Behaviour	taken personal financial course	4.90	2.187	0.001	0.972
	not taken	4.91	1.869		
	Total	4.90	2.122		
Financial Attitude	taken personal financial course	7.93	2.127	8.519	0.002
	not taken	8.24	1.964		
	Total	8.00	2.096		
Financial Knowledge	taken personal financial course	12.68	3.576	273.501	0.000
	not taken	9.72	3.311		
	Total	12.04	3.725		

Differently from this result, the overall score of financial attitude for financially educated students accounts for 7.93, which stands considerably lower compared to the overall score of students who are not financially educated (M=8.24). Since the significance of the F test (p=0.002) is less than the alpha value of 0.05, it can be accepted that there is a statistically significant difference in financial attitude among financially educated and non-educated students. Based on the statistics of financial knowledge it can be revealed that there is a significantly difference among the two groups of students. Results of mean comparison displays that financially educated students are more financially knowledgeable (M=12.68) than their counterparts (M=9.72). This difference is explored to be significant at 0.01 or greater level of significance (p =.000).

- *The Difference in Financial Literacy among Financially Educated and Not-Educated Students*

Question two: Are students that have taken a personal financial course more financially literate in comparison with their counterpart?

In order to reveal whether there is any significant difference in financial literacy among students that have taken a personal financial or money management course, a Welch's variance-weighted Analysis of Variance (ANOVA) technique is utilized. A summary table of the ANOVA for the financial literacy is provided in Table 4. From the table of statistics it can be observed that students who have taken a personal financial course are more financially literate (M=25.51) compared to their counterparts (M=22.86).

The obtained F (1,606) = 98.987, p = 0.000, is judged to be statistically significant using the predetermined Type I error rate of α = 0.05.

Table 4: ANOVA Analysis for Financial Literacy

	Mean	Std. Deviation	df	F	Sig.
taken personal financial course	25.51	5.407	1	98.987	0.000
not taken	22.86	4.533	606		
Total	24.94	5.342			

This result suggests that the mean financial literacy score among students who have taken a personal financial or money management course differs significantly in comparison with those who have not taken such a course. This would indicate financial education does have a significant impact on financial literacy scores.

Conclusions

This study surveys 607 students from eight universities across Albania to investigate the differences in financial literacy among students based on their financial education. The study reveals that in a comparison of financial literacy components, students that have taken a personal financial or money management course are more financially knowledgeable than students who do not have taken such a course. This suggests that financial education helps students to gain financial knowledge. However, results of this research indicate no differences in the financial behavior score between the two groups of students. Surprisingly, students not financially educated appears to yield a high score (M=8.24) in financial attitude component, differently from students who have taken a personal financial course that are displayed to score noticeably lower (M=7.93).

Considering all the three components together, it is found evidence that financial education is associated with financial literacy, since the overall score of financial literacy of financially educated students is shown to be significantly higher compared to their counterparts. This is evidence that attending a personal financial or money management course helps to be more financially knowledgeable and literate.

It is acceptable among researchers that differences in financial literacy may result in different financial management, which should receive more attention by practitioners and educational institutions to include personal finance subjects in the school curriculum. By requiring a course in financial management, administrators and faculty

help students at their high schools and universities have a better chance at succeeding in today's increasingly complicated economy. Based on the findings of the present study it is recommended that further research be conducted to understand and control for other factors that predict financial literacy for university students.

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