

DECISION MAKING, ATTITUDES, AND BEHAVIOURS ON FINANCIAL LITERACY AMONG FILIPINO COLLEGE STUDENTS: FACTORIAL AND CORRELATIONAL ANALYSES

Abstract

Researches revealed that there is an urgent need for financial literacy (Hung, Parker, & Yoong, 2009; Nidar & Bestari, 2012; Mihalčová, Csikósová, & Antošovác, 2014; Agarwal et. al, 2015). However, in the Philippine context, financial literacy has not been extensively explored (Leano, 2006). This research study aimed at analyzing the reliability and validity of Filipino college students' financial literacy based on Questionnaire for Assessing Financial Literacy (QAFL), a 12-item Likert scale with acceptable internal consistency ($\alpha = 0.74$) developed by (Čonková, 2014). Specifically, this study aimed to analyze the relationship between students' decision making, attitudes, and behavior in the financial market. It utilized a simple random sampling technique. A total of 140 Filipino college students participated in this study. SPSS was used for statistical data analysis. Results of the reliability analysis for Cronbach's Alpha if item deleted showed an overall acceptable range ($\alpha = .722-.775$) and Cronbach's Alpha based on standardized items ($\alpha = 0.750$). Results of the factor analysis revealed an appreciable factor loading = .49 up to the high factor loading = .82 construct validity. Results of the correlation analysis revealed that the relationships were statistically significant as follows: decision making and attitudes toward finances ($r_s = 0.52$), decision making and financial behavior ($r_s = 0.49$), attitudes and financial behavior ($r_s = 0.45$). Thus, it is concluded that financial literacy is relevant to aid students in addressing issues affecting their decision making, attitudes, and behaviors in the financial market.

Key words: Financial Literacy, Filipino College Students, Factorial Analysis, Correlational Analysis

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Introduction

In 2008, former President George Washington Bush of the United States of America made financial literacy a national priority by creating "The President's Advisory Council on Financial Literacy" (Iowa State University 2008; as cited in Morris and Koffi, 2015). The significance of financial literacy has been acknowledged by the ECOFIN Council of the European Union at a global level (Pastoráková, 2011; as cited in Mihalčová, Csikósová, & Antošovác, 2014). The Department of Finance Canada (2011) recognized the urgency of financial literacy as well. Previous researches all over the world revealed that there is an urgent need for financial literacy in various aspects for specific target respondents in South Africa (Fatoki, 2014), Pakistan (Arif, 2015), India (Agarwal et. al, 2015; Naidu, 2017), Australia (Gallery, et al., 2011; Agnew, et al., 2013), Malaysia (Boon, Yee, & Ting, 2011) among others. Some scholars have seen the need and significance of developing a standard scale in measuring financial literacy (Hung, et al., 2009; Kempson, 2009; Huston, 2010).

There has been a growing interest also on financial literacy among young adults or university students. The 2013 Survey of Consumer Finances provides extensive data on the ways young adults in the United States are participating in the financial market (Peach & Yuan, 2017). In Europe, findings confirmed that small scale training intervention's impact positively the financial knowledge among university students (Brugiavini, et al., 2015). Other scholars explored university students' financial literacy in Africa (Louw, Fouché & Oberholzer, 2013), Slovakia (Pružinsky & Mihalčová, 2014) Indonesia (Nidar & Bestari, 2012), Malaysia (Falahati & Paim, 2011) among others. However, in the Philippine context, studies regarding financial literacy among university students have been scarce. Thus, this research study aimed at analyzing the reliability and validity of Filipino college students' financial literacy based on Questionnaire for Assessing Financial Literacy (QAFL), a 12-item Likert scale developed by (Čonková, 2014). Specifically, it analyzed the decision making, attitudes, and behaviours as variables on financial literacy among Filipino college students by way of factorial and correlational analyses.

Methodology

Research Design

This study used descriptive-factorial and descriptive-correlational approaches. SPSS was used for the descriptive statistical analysis. The researchers administered the QAFL survey instrument among 140 Filipino college students major in internal auditing, business, and finance participated in this study from two (2) Manila-based schools in different levels from (1st year – 4th year) as target participants of the study. It utilized a simple random technique. Participants of the study were oriented and given informed consent before answering the survey instrument QAFL. The researchers modified the scale point system, thereby using a five-point Likert scale, 1-strongly disagree, 2- disagree, 3-neutral, 4-agree, and 5-strongly agree to measure accurately students' financial literacy levels on decision making, attitudes, and behaviours in the financial market. In other words, the survey instrument implies the higher the students' score, the higher they are financially literate on each item of QAFL.

The Survey Instrument

This study used the Questionnaire for Assessing Financial Literacy (QAFL), a 12-item Likert scale with acceptable internal consistency ($\alpha = 0.74$) developed by (Čonková, 2014). The utilization of this scale highlighted the variables decision making, attitudes, and behaviours in the financial market necessary in measuring the financial literacy levels of Filipino college students.

QAFL has undergone five (5) stages of development: 1) modification of the scale pointing system, 2) self-administration of the survey questionnaire QAFL among 140 Filipino college students, 3) use of SPSS statistical analysis on scale reliability test, 4) construct validity by factor loadings and, 5) correlational analysis for the variables: decision making, attitudes and behaviours in the financial market.

Results And Discussion

Descriptive Statistics

Results of the mean scores in Figure 1 revealed that item Q7 "Did you invest or save money last year?" got the lowest mean score of 2.08, while item Q1 "Before buying something, I carefully consider whether I can do it." got the highest mean score of 4.16. Respondents got a total mean score of 3.11 (moderately financial literate). In other words, results implied that Filipino college students are not actively engaging in investing money but they are critical in buying financial products.

Figure 1: Item Statistics

Item-Statements	Mean	Std. Deviation	Verbal Interpretation
Q1. Before buying something, I carefully consider whether I can do it.	4.1571	.97650	Highly financial literate
Q2. I pay my bills on time.	3.9643	.96269	Highly financial literate
Q3. I carefully monitor and control my accounts.	3.4143	1.22906	Moderately financial literate
Q4. Did you take a loan to cover current expenses in the last 12 month?	3.2071	1.12842	Moderately financial literate
Q5. I set long-term goals and try to achieve them.	3.6429	1.24121	Highly financial literate
Q6. I am responsible and I prepare my personal budget.	2.4929	.98548	Lowly financial literate
Q7. Did you invest of save money last year?	2.0786	1.20591	Lowly financial literate
Q8. I find it more satisfying to spend money than to save it for the long term.	2.6500	1.26903	Moderately financial literate
Q9. I tend to live for today and let tomorrow take care of itself.	2.5500	1.14002	Moderately financial literate
Q10. Money is there to be spent.	2.8643	1.27065	Moderately financial literate
Q11. I choose financial products after gathering adequate information.	4.1429	.91802	Highly financial literate
Q12. I choose financial products after I look around in the market, got independent information, and requested for piece of advice.	2.1929	1.26887	Lowly financial literate

*Legend: 4.5 - 5 = Extremely financial literate
 3.5 - 4.49 = Highly financial literate
 2.5 - 3.49 = Moderately financial literate
 1.5 - 2.49 = Lowly financial literate
 0 - 1.49 = Very lowly financial literate

*Grand Mean = 3.11

Figure 2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.759	.750	12

Results of the reliability analysis for Cronbach's Alpha based on standardized items revealed ($\alpha = 0.750$) as shown in Figure 2 and Cronbach's Alpha if item deleted revealed an overall acceptable range of ($\alpha = .722 - .775$) as shown in Figure 3. Thus, this implied that the QAFL survey questionnaire is reliable. All items revealed acceptable internal consistency.

Figure 3: Item-Total Statistics

Item-Statements	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	33.2000	45.888	.335	.230	.749
Q2	33.3929	46.068	.327	.288	.749
Q3	33.9429	41.493	.522	.400	.726
Q4	34.1500	41.769	.564	.402	.722
Q5	33.7143	41.385	.522	.432	.726
Q6	34.8643	48.622	.122	.113	.769
Q7	35.2786	42.418	.471	.319	.733
Q8	34.7071	40.870	.542	.392	.723
Q9	34.8071	42.128	.530	.395	.726
Q10	34.4929	41.460	.501	.430	.729
Q11	33.2143	48.817	.125	.055	.767
Q12	35.1643	47.361	.131	.041	.775

Figure 4: Eigenvalue for Factorial Loadings

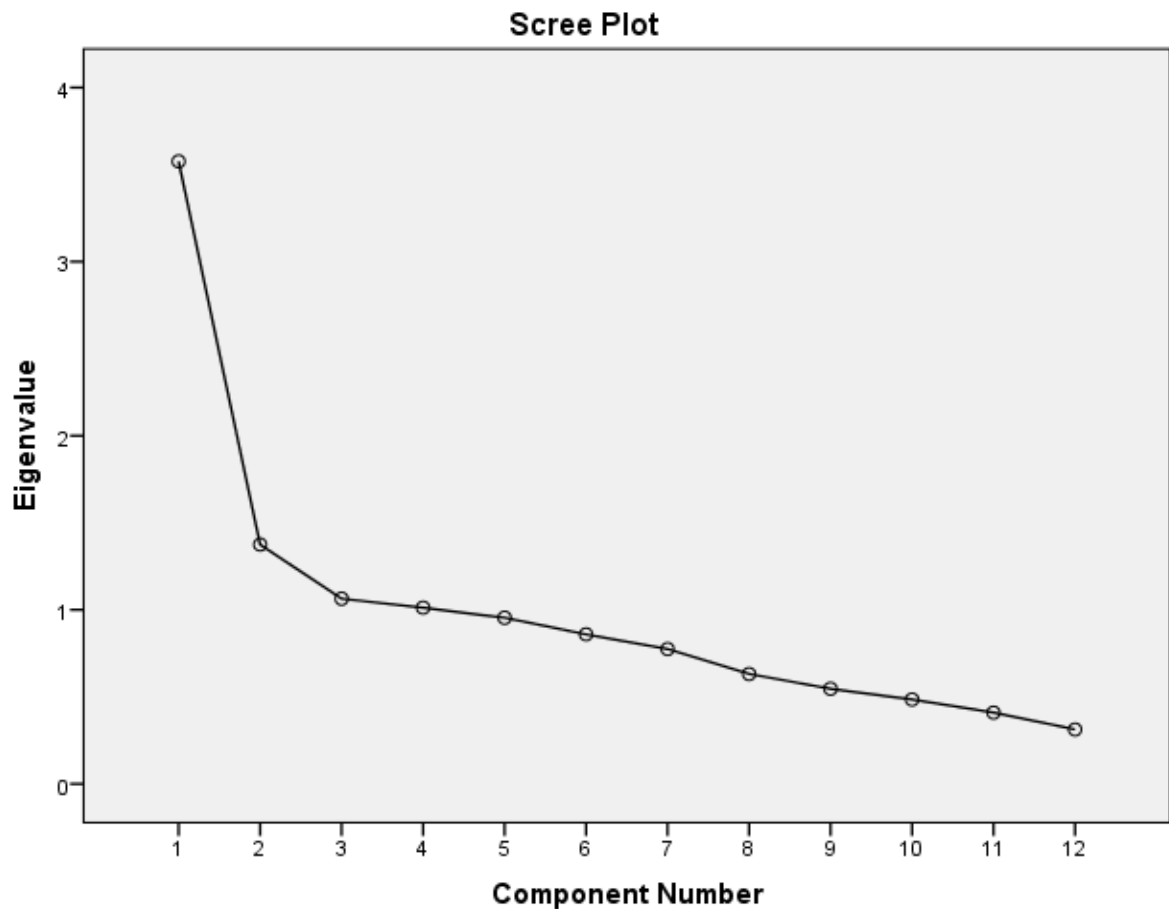


Figure 5: Rotated Component Matrix^a

Item-Statements	Component			
	1	2	3	4
Q1		.797		
Q2		.817		
Q3	.655			
Q4	.556		.488	
Q5	.665			
Q6				
Q7	.669			
Q8	.710			
Q9	.702			
Q10	.721			
Q11				.769
Q12			.813	

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.^a
 a. Rotation converged in 5 iterations.

To establish the construct validity of the QAFL factor analysis was used by the researchers. Figure 5 presents the Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, with rotation converged in 5 iterations that revealed seven (7) factor loadings. Overall, the results of the factor analysis revealed an appreciable factor loading (= .49 up to the high factor loading = .82) construct validity. Items with <0.40 were removed to establish the validity of factorial loadings.

Specifically, the first factor showed one (1) loaded appreciably (.56) out of 12 items and six (6) loaded with the highest loadings (>.7) which are indicative of a) decision making for future finances on saving and preparing budget/money for long-term goals (items 3, 4 and 5), attitudes toward financial matters on spending money (items 7 and 8) and, current financial behaviours on buying something and paying bills (items 9 and 10). The second factor showed zero (0) loaded appreciably (.4-.6) and two (2) loaded with the highest loadings (>.7) which are indicative of b) critically choosing of financial products by gathering adequate information (items 1 and 2). The third factor showed one (1) loaded appreciably (.4-.6) and one (1) loaded with the highest loading (.82) which is indicative of availing of loans (item 12). The fourth factor showed zero (0) or none loaded appreciably (.4-.6) and one (1) loaded with the highest loading (.77) which is indicative of d) monitoring and controlling personal accounts (item 11).

Figure 6. 1: Correlations

		Decision for Future Finances	Attitudes toward Finances
Decision Making for Future Finances	Pearson Correlation	1	.516**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	126.136	53.201
	Covariance	.907	.383
	N	140	140
Attitudes toward Finances	Pearson Correlation	.516**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	53.201	84.237
	Covariance	.383	.606
	N	140	140

Figure 6. 2: Correlations

		Decision for Future Finances	Current Financial Behavior
Decision Making for Future Finances	Pearson Correlation	1	.486**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	126.136	44.104
	Covariance	.907	.317
	N	140	140
Current Financial Behavior	Pearson Correlation	.486**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	44.104	65.391
	Covariance	.317	.470
	N	140	140

Figure 6. 3: Correlations

		Attitudes toward Finances	Current Financial Behavior
Attitudes toward Finances	Pearson Correlation	1	.454**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	84.237	33.729
	Covariance	.606	.243
	N	140	140
Current Financial Behavior	Pearson Correlation	.454**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	33.729	65.391
	Covariance	.243	.470
	N	140	140

Results of the correlation analysis revealed positive relationships that were statistically significant as follows: a) decision making and attitudes toward finances ($r_s = 0.52$), b) decision making and financial behaviour ($r_s = 0.49$), c) attitudes and financial behavior ($r_s = 0.45$).

Conclusion

This research study aimed at analyzing the reliability and validity of Filipino college students' financial literacy based on Questionnaire for Assessing Financial Literacy (QAFL), a 12-item Likert scale with acceptable internal consistency ($\alpha = 0.74$) developed by (Čonková, 2014). Specifically, this study aimed to analyze the relationship between students' decision making, attitudes, and behavior in the financial market. Results of factorial analysis revealed the factors that affect Filipino college students' financial literacy based on the following: a) decision making for future finances on saving and preparing budget/money for long-term goals (items 3, 4 and 5), attitudes toward financial matters on

spending money (items 7 and 8) and, current financial behaviours on buying something and paying bills (items 9 and 10), b) critically choosing of financial products by gathering adequate information (items 1 and 2), c) availment of loans (item 12) and, d) monitoring and controlling personal accounts (item 11). Also, the results of the correlation analysis revealed that relationships were statistically significant as follows: decision making and attitudes toward finances ($r_s = 0.52$), decision making and financial behavior ($r_s = 0.49$), attitudes and financial behavior ($r_s = 0.45$). Thus, it is concluded that financial literacy is relevant to aid students in addressing issues affecting their decision making, attitudes, and behaviors in the financial market. It is suggested that intervention on business marketing and financial courses would be given to Filipino college students to increase positively their financial literacy for their benefits.

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