Gender, academic achievement, and ownership of ATM as predictors of accounting students' financial literacy

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Abstract. This study examined the relationships between GPA, gender, and ownership of ATM on accounting students' financial literacy (n = 184). Financial literacy was assessed using a paper-and-pencil objective (multiple choice) test measuring general knowledge of finance, income, money management savings, loans, and investment. Gender and GPA data were obtained from the university records. Regression analysis found that GPA and ownership of ATM were associated with financial literacy, but gender was not. Female students with an ownership of ATM and those with a high GPA were found to be superior to males. The implication of this research is that students are expected to increase their GPA and utilize financial facilities in the form of ownership ATM and other financial instruments so as to increase financial literacy. In addition, the need for financial literacy training from related parties to improve financial literacy for students who have low financial literacy.

1. Introduction

1.1. Background

The presence of diverse financial services has a positive side that this will provide improved prosperity for middle-class people who are unfamiliar with access to financial services. An example is banking services. Banking parties are increasingly competitive in innovating the products they offer to customers. It also makes access and regional and geographical conditions become one target of banking to be closer to the community. It also suggests that financial services do not belong to a group of people in urban areas alone.

In order for making the finances to be processed carefully, efficiently, and efficiently by utilizing financial services, it is important for individuals to understand about financial literacy. Financial literacy is a set of skills and knowledge that allows individuals to make effective decisions on their investments in order to improve their finances. Financial literacy is an effort to increase the public's sensitivity to the financial services sector, beginning with knowing, then believing, to being skilled at becoming actively involved, in other words achieving a well-literate society in the financial services sector.

The National Institute for Literacy [1] states that literacy is defined as an individual's ability to read, write and speak, calculate and solve problems at the required level of proficiency, in individuals, families, and communities. Financial literacy is financial knowledge and ability to Applying it in everyday life with the aim of achieving prosperity [2]. [3] Financial literacy puts more emphasis on the ability to understand the basic concepts of economics and finance, to how to apply them appropriately. [4,5] and Chen and Volpe state that financial Literacy as knowledge to manage

finances. The financial literacy indicators according to Chen and Volpe [3] are general knowledge of finance, savings, and loans, insurance, and investment. Meanwhile, according to Jumpstart Coalition states, financial literacy indicators are income, financial management, savings and investment, and loans or credit.

The low level of financial literacy in Indonesia makes the Financial Services Authority (OJK) issued several policies and programs to increase the financial literacy of the community one of them by launching the Indonesian National Strategy of Financial Literacy (SNLKI) consisting of three pillars with one of the pillars is the education and national campaign of literacy Finance. The policies and programs are not only for business actors but also for various groups, from housewives to students and students. Students are one of the components of society which is big enough to contribute to the economy because in the future the students will enter the world of work and begin to be independent in their financial management [6].

Nidar and Bestari [7] mentioned demographic factors affecting financial literacy including parental education, pocket money, education level, faculty, parent income and insurance. Research conducted by Mahdzan and Tabiani [8] found that influential demographic factors were age, gender, education level, number of children, marital status, and work experience. Cude at al [9] also resulted in the conclusion that the GPA factor affects the financial literacy, the higher the GPA score, the financial literacy will also be healthier or better. Nevertheless, the results of research conducted by Rita and Pesudo [10] state that the GPA has no significant effect on student financial literacy.

2. Research methods

This research is included in this type of quantitative research. Independent / independent variables in this study consisted of three variables namely, GPA (X1), Gender (X2), and ownership of ATM (X3). Sedangan dependent variable / bound that is financial literacy (Y). In the gender variables, researchers used the dummy method to see the effect of the dependent variable. Dummy variables here consist of two categories: male and female, therefore, used a dummy variable. Dummy variables are used because men and women belong to the nominal scale. The population in this study is all students of Department of Economic Education Prodi S1 Accounting Education and accounting year of the year 2013/2014 and 2014/2015 amounted to 342 students. While the sampling is determined by the proportional random sampling method where the target of the sample being studied is taken proportionally based on the total population of each class. So the number of samples taken on each class is not the same. Determination of the number of samples using the Slovin formula is

$$n = \frac{N}{(1+Ne^2)} \tag{1}$$

Description = n = Number of Sample
            N = Population
             e = significance level (0.05)

$$n = \frac{N}{(1+Ne^2)} \tag{2}$$

$$n = \frac{342}{(1+342 x 0,05^2)} \tag{3}$$

$$n = \frac{342}{(1+0,855)} \tag{4}$$

$$n = 184 \tag{5}$$

In this research, data collection technique used research instrument in the form of questionnaire/questionnaire. Before given to the questionnaire respondents first been tested the validity and reliability in order to be able to measure students' financial literacy well, as table 1.

Table 1 Total Population and Sample Research

Department / Study Program	Force	Population	Sample Calculation	Sample
	2013 A	50	50/342x184 = 26,90	27
Accounting	2013 B	39	39/342x184 = 20,98	21
	2014 A	49	49/342x184 = 26,36	26
	2014 B	50	50/342x184 = 26,90	27
Accounting	2013 A	36	36/342x184 = 19,36	19
Education	2013 B	35	35/342x184 = 18,83	19
	2014 A	42	42/342x184 = 22,59	23
	2014 B	41	41/342x184 = 21,78	22
Total		342	184	184

While the data analysis techniques use descriptive statistics to provide an overview of student financial literacy in the low or high category. Here are the criteria for students' financial literacy Interval [10] as follows:

$$\text{Interval} = \frac{\text{High Value} - \text{Value Values}}{\text{Many Class Intervals}} \tag{6}$$

$$\text{Interval} = \frac{100 - 0}{2} = 50 \tag{7}$$

So obtained interval data variable financial literacy as table 2 follows:

Table 2 Category of Financial Literacy Students

Financial Literacy	Category
0 < 50	low
51<100	High

While to test the influence between variables, we used multiple regression analysis. The form of multiple regression statistics in this study are as follows:

Y   = α + b1D1+ b2X1 + b3X2
Where :
Y   = Financial Literacy
α   = Constanta
b1   = Coefficient of gender
b2   = Coefficient of IPK
b3   = Coefficient of ownership ATM
D1   = Gender (dummy)
X1   = IPK
X2   = Ownership of ATM

3. Result of research

3.1. Literacy level Financial Accounting and Accounting Education students Faculty of Economics UNESA

The results of the descriptive analysis indicate that the students of accounting and accounting education force of 2013/2014 and 2014/2015 have financial literacy with an average of 51.00 with high category (100> 51). As many as 94 students (51%) studied were in high financial literacy classification, while 90 students (49%) were low (0 <50)

3.2. Classic assumption test

3.2.1 *Normality Test. To determine normally distributed research data, it can be shown in p-plot chart as follows:*
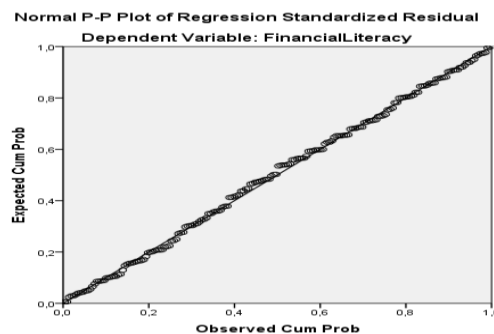
Graph 1. P-Plot Test Data Normality

Based on the results of spss test version 22, obtained p-plot table approaching slashes so it can be said normally distributed data.

3.2.2 *Multicollinearity test.* The multicollinearity test is used to determine whether there are independent variables that have similarities between the independent variables in a model. The output of SPSS version 22 can be shown in table coefficient as follows:
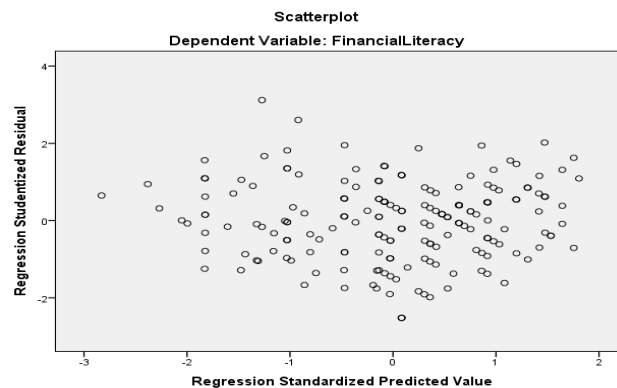
Table 3. Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	-246,252	19,375		-12,710	,000		
	Gender	-,071	1,673	-,002	-,043	,966	,983	1,018
	GPA	84,260	5,939	,684	14,189	,000	,805	1,242
	Ownership of ATM	12,073	2,506	,234	4,817	,000	,796	1,257

a. Dependent Variable: Financial Literacy

Based on the result of SPSS test version 22 above, obtained multicollinearity free data shown at VIF value less than 10.

Heteroscedasticity test. Heteroscedasticity test is a test that serves to know whether or not the deviation of classical assumption Heteroscedasticity that is the variant inequality of the residual for all observations on the regression model. Based on the result of SPSS test version 22, obtained free data of Heteroscedasticity indicated on spreading data spreads do not form a pattern.

Here are the test results through SPSS version 22 as figure 1:

Figure 1. Heteroscedasticity Test

3.3. Test Results coefficient of determination (R), Test t, and Test F

3.3.1 Test Result R. The R test is used to find out how big the simultaneous contribution of the independent variable to the dependent variable. Here is a summary model table that shows the value of R (Coefficient of determination) of a model.

Table 4. Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	,814a	,663	,657	10,893	1,218

a. Predictors: (Constant), Owner Savings Account, Gender, GPA
b. Dependent Variable: Financial Literacy

Based on SPSS version 22 results obtained data that Adjusted R Square value of 0.657. This means that the factors of financial literacy are influenced jointly by gender variables, ATM ownership and GPA of 65.7%. The rest is 34.3% influenced by variables outside the study.

3.3.2   Test Result t. To test the hypotheses 1, 2 and 3 in this research, it can be shown t-count results in table 3 that the above coefficient table should be greater than t table.

Ha 1: There is a GPA influence on accounting financial literacy and accounting education faculty of economics Universitas Negeri Surabaya.

Based on the above coefficient table, the t-hit value for the GPA of 14.189> 1.973, so that Ha1 is accepted. So it can be concluded that there is influence between variables GPA to financial literacy accounting students and accounting education faculty of economics Universitas Negeri Surabaya.

Ha 2: There are gender influences on the financial literacy of accounting students and accounting education faculty of Economics of Universitas Negeri Surabaya. Based on the above coefficient table, the t-count value for the gender variables is 0,043 <1,973, so Ha 2 is rejected. So it can be concluded that there is no influence between gender variables on accounting student financial literacy and accounting education faculty of economics Universitas Negeri Surabaya.

Ha 3: There is an influence of ATM ownership on the financial literacy of accounting students and accounting education of the faculty of economics of Universitas Negeri Surabaya. Based on the above coefficient table, the t-count value for the ATM ownership variable is 4.817> 1.973, so that Ha 3 is accepted. So it can be concluded that there is an influence between variable ownership of ATM to financial literacy accounting student and education accounting faculty of economics of Universitas Negeri Surabaya.

3.3.3 *Test Result F*. F test is used to test hypothesis 4 (Ha 4) that is influenced simultaneously between gender variables, IPK and ownership of ATM to financial literacy of Accounting and Accounting education student of Economic Faculty of UNESA. The results of the F test can be shown in the following ANOVA table:

Table 5. – ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	41980,191	3	13993,397	117,928	,000b
	Residual	21358,803	180	118,660		
	Total	63338,995	183			

a. Dependent Variable: Financial Literacy

b. Predictors: (Constant), Owner Savings Account, Gender, GPA

The acceptance criteria of Ha is if F arithmetic> F table.

Ha 4: There is a simultaneous influence between cumulative achievement index, gender and savings account ownership on financial literacy of accounting students and accounting education faculty of economics Universitas Negeri Surabaya

In the table above the value of F table: F arithmetic is 117,928> 2.65 then Ha4 accepted. So it can be concluded there is a simultaneous influence between the cumulative achievement index, gender and savings account ownership of financial literacy accounting students and accounting education faculty of economics State Universitas Negeri Surabaya.

4. Discussion

There is a GPA influence on the financial literacy of accounting and accounting education students Faculty of Economics, Universitas Negeri Surabaya. The result of the statistical analysis indicates that the GPA (Grade Point Average) has a positive and significant influence on the financial literacy of accounting and accounting students FE UNESA. The influence here means that the higher the student's GPA, the financial literacy will also increase. Conversely, the lower the student's GPA, the lower the financial literacy. Thereby causing their financial knowledge to differ from each other. Differences in the ability to understand the concept of finance at the time of lectures make students with high GPA tends to have a better financial concept than the students with lower GPA. In the end, the financial literacy of students with high GPA is better than those with lower GPA.

The statistics show that female students have higher financial literacy compared to male students. According to the researchers' observations, the difference in financial literacy between male and female students is because female students are more diligent to understand matters relating to financial understanding. Female students are also more diligent to make financial planning both in the short and long term. This is because women are more anxious and afraid of financial problems, causing them to be more careful. The results of this study support the theory of Cude et al. [9] which revealed that the higher the GPA score, the financial literacy will also be healthier or better.

There is no influence of gender on accounting financial literacy and accounting education Faculty of Economics, Universitas Negeri Surabaya. The results showed that gender does not affect student financial literacy. This shows that both male students as well as in the faculty of economics, especially the accounting and accounting education professions have no difference in terms of understanding financial information. The results of this study do not support the theory that the students' financial literacy is influenced by gender. [3]. The results of this study are in accordance with research by Rita and Pesudo [10] that gender variables do not significantly affect the financial literacy of the students because they are suspected to be familiar with the forms of financial management and financial products.

There is the influence of ATM ownership to the financial literacy of accounting and accounting education students Faculty of Economics, Universitas Negeri Surabaya. The results of this study indicate that the ownership of ATM significantly affects the financial literacy of Accounting and Accounting education students. Students who use ATMs have relatively high financial literacy

compared to students who do not use ATMs. Mandell [11] explains that students who use ATMs can manage their finances practically as they can easily conduct financial transactions considering the ATM function as a debit card that can be used to pay a certain expense without giving cash. He also found that the use of ATMs can affect a person's financial literacy level. There is a simultaneous influence between genders, GPA and ownership of ATM affect the financial literacy of accounting and accounting education students Faculty of Economics, Universitas Negeri Surabaya.

5.   Conclusion and recommendations

Based on the results of research and discussion, it can be concluded that there is a GPA influence on the financial literacy of accounting and accounting education students Faculty of Economics, Universitas Negeri Surabaya. There is no influence of gender on the financial literacy of accounting and accounting education students Faculty of Economics, Universitas Negeri Surabaya. There is an influence of ATM ownership to financial literacy of accounting and accounting education student Faculty of Economics, Universitas Negeri Surabaya. There is simultaneous influence between gender, GPA and ownership of ATM influences to financial literacy of accounting and accounting education student Faculty of Economics Universitas Negeri Surabaya

References

[1] Remund D 2010 Financial Literacy Expliced, The Case for a Clearer Definition in a Increasingly complex Economy *J. Consum. Aff. Summer* **44** 276–95

[2] Lusardi A and Mitchell O S 2007 Baby Boomer Retirement Security: The Roles Of Planning, Financial Literacy, And Housing Wealth *J. Monet. Econ.* **54** 205–24

[3] Chen H and Volpe R P 1998 An Analysis of Personal Financial Literacy Among College Students *Financ. Serv. Rev.* **7** 107–28

[4] Danes S M and Hira T K 1987 Money Management Knowledge Of College Students *J. Student Financ. Aid* **17** 4–16

[5] Keown and Anne L 2011 The Financial Knowledge of Canadians *Canadian Social Trends*

[6] Nababan, Darman, Sadalia and Isfenti 2012 Analisis Personal Financial Literacy dan Financial Behavior Mahasiswa Strata I Fakultas Ekonomi Universitas Sumatera Utara *J. Media Inf. Manaj.* **1**

[7] Nidar, Rahman S, Bestari and Sandi 2012 Personal Financial Literacy Among University Students (Case Study at Padjadjaran University Students, Bandung, Indonesia) *World J. Soc. Sci.* **2** 162–71

[8] Mahdzan, Nurul S and Saleh T 2013 The Impact of Financial Literacy on Individual Saving: An Exploratory Study in The Malaysian Context *Transform. Bus. Econ.* **12**

[9] Cude B J, Lawrence F C, Lyons A C, Metzger K, LeJeune E s, Marks L and Machtmes K 2006 College Students and Financial Literacy: What They Know What We Need to Learn *Conference Eastern Family Economic and Resource Management association*

[10] Rita, Maria R, Pesudo and Beaya C A 2014 Apakah Mahasiswa Sudah Melek Keuangan? *J. Din. Akuntansi, Keuang. dan Perbank.* **3** 58–65

[11] Mandell and Lewis 2008 *The Financial Literacy of Young American Adults: Results of The 2008 National Jump$Tart Coalition Survey of High School Seniors and College Students* (Washington DC: The Jump$tart Coalition for Personal Financial Literacy)