Analysis on Factors Influencing Students Financial Literacy

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Abstract

Financial literacy has become a hot issue to be discussed nowadays. This is because the mastery on finance can lead to financial welfare. Education highly contributes in the increment of financial literacy, and this research focuses on how gender, age, parents' income and University affect in students' financial literacy. This research is done to 451 Economic and Business students by using accidental sampling. Financial literacy is analyzed with descriptive analysis and factor analysis with Confirmatory Factor Analysis (CFA) using Structural Equation Model (SEM). The result shows that age, gender, and parents' income affect students' financial literacy in significant way, while University income doesn't affect in significant way.

Keywords: financial literacy, financial behavior.

Introduction

Financial literacy has become main issue in recent years in all over the world. Financial education has an important role in increasing financial skill, and this is recognized by countries in G20 (OJK, 2017). Skill to manage finance has become important in these modern days. Every individual should have knowledge in managing personal finance such as money management, spending, credit, saving and investing and also risk management. Because good financial management will result smart decision and effective to strive welfare.

High education is a gate leading to face complexity of managing own finance, including various kinds of financial and service product with own risks. Mistake in managing finance can cause lifetime problem and can spread to family and environment (Lusardi, 2015). Chen and Volpe (1998), also states that students with low financial literacy, tend to make mistakes in their financial decisions. Financial literacy will help students in making decision, and responsible for the risk.

This research also sees and retests Chen and Volpe (1998) finding about systematic deficiency in financial education in America. Lacking of financial literacy leads to huge risk. Mistake in personal financial management leads to anxiety which impact on performance in workplace and then cause problems in environment. This deficiency is found not only in America. Research done by Beal & Delpachitra (2003) to students in Australia shows almost the same conclusion. This makes students in Australia are not skilled and do not understand personal financial management. This condition tends to give negative impact on their future life and badly influence to the country economy development.

However, the research done to Turkish student shows different result. Selcuk & Yilmas (2014) find that students who have lesson related to finance, economy and business in the university, tend to achieve higher financial literacy than who don't.

Indonesian government, through Otoritas Jasa Keuangan (OJK), since 2013, has done various educations in 144 cities in Indonesia. This Institution has compiled and launch book related to financial literacy for formal education, from primary school until university. These programs were done as the proves of Indonesian government commitment to increase financial literacy index in society (OJK, 2017).

Starting from different findings in some countries which are stated before and regarding OJK persistence in increasing financial literacy index in society, this research wants to review and retest the relation between personal financial management educations with financial literacy level in students. Besides, this research wants to see what factors affect students' financial literacy in Indonesia, especially in University of Muhammadiyah Sumatera. The subject is Economic and Business students who receive more education about personal financial management.

Literature Review

Financial literacy is the skill to read, analyze, manage and communicate personal finance condition. Financial literacy also shows skill to choose wisely from various kind of financial management while discussing conditions and things related to finance management and other economy problem. The purpose is to plan good financial planning and financial welfare in the future (Vitt et al, in Huston: 2010).

Financial literacy is the ability of a person to utilize the resources he has to achieve the goal. A person's ability to acquire, understand, and evaluate relevant information to make financial decisions and be able to understand all the consequences (Carolinne L J Mason & Richard M. S Wilson: 2000). Therefore, according to Krishna et al (2010) financial literated will help person to avoid financial problem. Furthermore Krishna et al. (2010) states that financial problem is not only about low income. But also, arise from personal financial management mistake such as credit card misuse or no financial planning. This financial problem can cause stress and inferiority.

Other research shows that gender is one of the factors affecting financial literacy. But, the experts are still debating which gender shows higher financial literacy. Chen & Volpe (1998) research shows men understand financial literacy more than women. On the other hand, Krishna et al (2010) concludes that women understand financial literacy more than men (Krishna et al., 2010). Based on the studies, hypothesis H1: Gender affects the student's financial literacy.

Other factor is age, as shown in Chen and Volpe (2002) research. Nevertheless Shaari, Hasan, Mohamed, and Sabri (2013) research students in Malaysia, find that there is a negative effect between age and student financial literacy. Based on the studies, hypothesis H2: Age affects the student's financial literacy.

Nidar dan Bestari (2012) found that income from parents is a significant factor to the level of financial literacy in the students of West Java. Margaretha et al (2015) also found that there is a relationship between parental incomes with financial knowledge. H3: parent's income effect the student's financial literacy.

The other factor that also rises is university education effects. As stated before research modern country likes America and Australia show that there is no correlation between university educations to financial literacy. However in Turkey

there is a correlation. Indonesia is quite same with Turkey as development Moslem country, that's why H4 in this research is university education affects students' financial literacy level.

Hypothesis
The hypotheses in this study are as follows:
H1: Gender affects students' financial literacy level
H2: Age affects students' financial literacy level
H3: Parents' income affects students' financial literacy level
H4: University education affects students' financial literacy level.

Research Method
Data Analysis Method
This descriptive research is to get description of the phenomenon. How gender, age, parents' income, and university education affect students financial literacy. Data collection is done through questionnaire to 500 students in Economy faculty in University of Muhammadiyah Sumatera Utara. From 500 distributed questionnaires, 451 questionnaires can be used in this research.

Research variable
Student financial literacy is a dependent variable in this research. Financial literacy is a skill to choose wisely from various kind of financial management and personal financial management. In this research, variable is measured with financial literacy questionnaire related to basic personal financial, income, spending, credit, debt, saving, investment and insurance. Variable measurement is done based on truth percentage from respondent answers. The answers then divided to three categories based on the research (Chen & Volve, 1998; Nababan & Sadalia, 2012; Margaretha & Pambudhi, 2015). The three categories are:
1. < 60%, shows low level financial literacy
2. 60% - 79%, shows medium level financial literacy
3. > 80%, shows high level financial literacy.

This research is consisted of five independent variables, which are classified as:
1. Gender Variable explains classification of respondent gender, male or female.
2. Age variable explains classification of respondent age. Age characteristic is divided to 3 categories: 1). Age <18 years old, 2). Age 18 years old to 22 years old, 3). Age >22 years old.
3. Parents' income Variable explains parents' income level. This variable is counted from take home pay income, whether formal job or non-formal, added to other income including investment. This variable is divided to 3 categories: 1). Parent's Income < Rp 5.000.000,-/month, 2). Parent's Income between Rp 5,000,000 to Rp 10,000,000/month, 3). Parent's income > Rp 10,000,000/month.
4. University education variable explains how the effect of education is. This variable is used to view respondents based on lessons received related to financial literacy.

Result and Discussion
Based on the result of the distributed questionnaires, the characteristic of samples is as below:

Table 1. Characteristic of sample.

	Number of Participants	Percentage
Gender		
Male	198	43.90%
Female	253	56.10%

Age		
Age <18 years old	73	16.19%
18 years old - 21 years old	243	53.88%
Age >21 years old	135	29.93%
Parent's Income		
< Rp5.000.000,-/month	96	21.29%
Rp5,000,000 to	262	58.31%
Rp10,000,000/month	93	20.62%
> Rp10,000,000/month		

Based on the gender characteristic, it shows that there are 253 females and 198 males as respondents. Female respondents are more than male respondents.

Based on age, the most are from students with age from 18 years old to 22 years old. It means that the respondents are from students from early until late semester. 135 respondents are above 21-year-old students and are still active in university, commonly are students who are still active and still working.

The majority of the characteristic respondent from Parent's income is in incomes Between Rp 5,000,000 to Rp 10,000,000/month. It means mostly of respondents were in middle level of family income.

Characteristic data from education level shows how education level received by respondents. Because respondents can choose mandatory lesson and not depends on university requirement.

Table 2. Sample characteristic from education level.

	Mean score (1=never; 5=excellent)
I have received lesson related to:	
Financial Management	8.1
Investment	6.8
Funding source management	6.1
Insurance	2.3

Table 3. Percentage of truth answer respondent based on financial literacy questionnaires.

Specific Focus of Financial literacy	Correct Answer (%)
Financial Management	
Banking Product	72%
Bank other money institutions	45%
Saving	86%
Time value of money	67%
Compound interest	38%
Tax	45%
Interest	51%
Inflation	39%
The Importance of Investing	61%
Investment	
Product Knowledge of investment	42%
Capital Market	61%
Risk and Return	43%
Capital Gain/Loss	32%
Investment Analysis	61%

Portfolio	46%
Diversification	44%
Capital Structure	
Fund	39%
Funding mechanism	29%
Insurance	
Life Insurance	23%
General Insurance	17%

The rating level of students' financial literacy level is scored based on the percentage of respondents' correct answers. Overall, the result of Student financial literacy in University of Muhammadiyah Sumatera Utara as follows:

Table 4. Student financial literacy level.

Level	N	Percentage
High	98	21.73%
Medium	212	47.01%
Low	141	31.26%

The table above illustrates the level of financial literacy of students at the University of Muhammadiyah Sumatera Utara. The rating level is based on the percentage of respondents' answers correct. The majority of the financial literacy level of students is at low level (47.01%). The lowest answer percentage is in insurance, 23% answer correctly the question related to personal insurance, and only 17% who are able to answer correctly question related to general insurance.

Hypothesis test results
Factor testing is done with Confirmatory Factor Analysis with Structural Equation Model (SEM). The result is as below:

Table 5. Output regression weight: factors to financial literacy.

Hypothesis	Estimate (β)	S.E.	C.R	Significance	Result
Gender	0.588	0.078	6.993	0.020	H1 acceptable
Age	0.618	0.003	6.972	0.000	H1 acceptable
Parents Income	0.757	0.076	11.060	0.000	H1 acceptable
Higher education lessons	0.097	0.052	1.477	0.140	H1 deny

Hypothesis 1
H0: Gender factors do not affect the level of student financial literacy
H1: Gender factor affects the student's financial literacy
Based on confirmatory factor analysis, gender affect critical ratio of 6.993 in positive and significant way. Estimate result of 0.588 shows that gender affect 58% to student financial literacy. This study is in line with research done by Krishna et al (2010) and Margaretha et al (2015), which found that the level of financial literacy of male students is lower than the level of financial literacy of female students.

Hypothesis 2
H0: The age factor has no effect on the level of student financial literacy
H1: Age factor affects the student's financial literacy
Age factor affect positively and significantly to student financial literacy (C.R. 6.972), and from estimated result β shows the picture that age affect 61% to student financial literacy. The results of this study are in accordance with previous

research conducted by Margaretha et al (2015), which found that gender factors affect the level of student financial literacy.

Hypothesis 3
H0. Parent's income factor does not affect the level of student's financial literacy
H1: parent's income factor effect the student's financial literacy.
Parents' income affect positively and significantly to student financial literacy ($\beta=$ 0.757) with the critical ratio of 11.060. Student financial literacy is affected by parent's income with 75%, and this result in significant level of 1% (C.R. 11.060). This study is in line with the research that has been done by Nidar and Bastari (2012) and Margaretha et al., (2015), the results of the study argue that the level of student financial literacy is influenced by parental income.

Hypothesis 4
H0. Education level factor does not affect the level of student's financial literacy
H1: Education level factor effect the student's financial literacy.
Based on the analysis, Education level affect positively to student financial literacy but not significant. This is showed from the critical ratio result of 1.96 (C.R. 1.477). Estimate β is 0.097, showing that Education factor has only influence of 9.7% to student financial literacy.

The research of Selcuk & Yilmas (2014) to Turkish student finds that students who received lesson related finance, economy and business in university tends to achieve higher financial literacy than those who doesn't. However, this research shows that the education level is not a big factor which affects student financial literacy. Chen & Volpe, (1998) dan Beal & Delpachita (2003) find that there is a basis and systematic deficiency in personal financial education.

Conclusion

This research sees how gender, age, parents' income and university education contribute in student financial literacy. This Research done to 451 students find that the result from students studying in Faculty of Economics and Business, University of Muhammadiyah Sumatera Utara are in low level (47.01%). The lowest answer percentage is in insurance, 23% students managed to answer the question related to personal insurance, and only 17% who managed to answer questions related to general insurance.

Factor analysis find that gender has effect of 58% to student financial literacy and age has effect of 61% to student financial literacy. The biggest factor which effect student financial literacy is parent's income, which is 75%. While, Education level has effect only 9.7% to student financial literacy.

References

Beal, Diana, P & Delphacitra, Sarath, B. (2003). Financial literacy among Australian University Student. *Economic Papers.* 22(1), 65-78*.*

Chen, H. R.P. Volpe. An Analysis of Personal Financial literacy Among College Students. *Financial Services Review*, 7 (2)(1998) 107-128.

Chen, Haiyang., & Volpe, Ronald. P. Gender differences in personal financial Literacy among college students. *Financial Services Review, 11(2002), 289-307.*

Krishna, A., Rofaida, R., & Sari, M. (2010). Analysis of the Level of Financial Literacy among Students and the Factors that Influence. *Proceedings of the 4th International Conference on teacher Education*; Join Conference UPI & UPSI Bandung, Indonesia.

Nidar, S. R., & Bestari, S. (2012). Personal literacy among university students (case study at Padjajaran University students, Bandung, Indonesia*. World Journal of Social Science*, 2(4), 162-171.

Margaretha, F., Pambudhi, R. A.,(2015).Financial literacy Level on Student S-1 Faculty of Economics. *JMK*. 17(1), 76-85.

Mason, C. L.J., Wilson, R.. M. S., (2000). Conceptualizing financial literacy Business School Research Series.

M. A. Hilgert, J. M. Hogarth, S.G Beverly. Household Financial Management: The Connection between Knowledge and Behavior*. Federal Reserve Bulletin*, 89 (2003) 309-322.

M. van Rooij, A. Lusardi, R. Alessie. (2008). Financial literacy and Stock Market Participation. *University of Michigan Retirement Research Center Working paper,* (2007) 162.

Nidar, S. R., &Bestari, S. (2012). Personal literacy among university students (case study at Padjajaran University students, Bandung, Indonesia. *World journal of Social science*, 2(24), 162-171.

OJK (2016). *National Survey of Literacy and Financial Inclusion.* Accessed 24 June 2017.www.OJK.go.id.

OJK (2017, Mei 10). Siaran Pers: Global Inclusion Awards 2017. Retrieved from http://www.ojk.go.id/id/berita-dan-kegiatan/siaranpers/Documents/Pages/ Siaran-Pers-Global-Inclusion-Awards-2017%2C-Pengakuan-Internasional-untuk-Program-Inklusi-Keuangan-Indonesia/SP%2050%20DKNS%20OJK% 20V%202017.pdf.

OJK (2017, January 24). Siaran Pers: OJK: Indeks Literasi dan Inklusi Keuangan Meningkat**.** Retrieved from http://www.ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Siaran-Pers-OJK-Indeks-Literasi-dan-Inklusi-Keuangan-Meningkat.aspx.

M. A. Hilgert, J. M. Hogarth, S.G Beverly. Household Financial Management: The Connection between Knowledge and Behavior. *Federal Reserve Bulletin*, 89 (2003) 309-322.

Remund, D. L. (2010). Financial literacy explicated: The case for a clear definition in an increasingly complex economy. *The journal of Consumer Affair*, 44(2), 276-295.

Sabri, M. F., Othman, M. A., Masud, J., Paim, L., MacDonald, M., & Hira, T.K. (2008). Financial behavior and problems among college students in Malaysia: Research and education implication. *Consumer Interest Annual*, 54, 166-170.

Widayati, I. (2012). Factors affecting the financial literacy of UB faculty of economics and business students. *Journal of Accounting for Education*1 (1), 89-99.