Financial Literacy, Self-Efficacy, and Financial Behaviour of College Students

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ABSTRACT

Many policies have been provided to improve the financial literacy of individuals, especially those involving financial education programmes. However, positive financial behaviour requires more than financial literacy: an individual must also have self-confidence or self-belief in their ability to manage their personal finances. This attribute is known in the psychological literature as "self-efficacy". This paper examines the importance of financial literacy and self-efficacy in affecting individual financial behaviour. The research is conducted through a survey of 129 undergraduates of Economics Education, at Sebelas Maret University. The results of the research show that both financial literacy and self-efficacy have positive and significant effects on financial behaviour. Undergraduates with high financial literacy are more likely to hold investment and savings products and are less likely to hold debt-related products. Similarly, undergraduates who have high self-efficacy are likely to be better at managing their personal finances. Moreover, the significance of financial literacy and self-efficacy has important implications for the development of policies that aim to improve financial behaviour among college students through financial education programmes.

Keywords: financial literacy; self-efficacy; financial behaviour; financial education.

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INTRODUCTION

Recently, the governments of many countries have implemented national strategies related to financial literacy in order to improve their citizens' financial welfare (Hira, 2010). The main strategy used to improve financial behaviour is the creation of financial education programmes (Asian Development Bank, 2013; Australian Securities and Investment Commission, 2013; Financial Literacy and Education, 2011). Financial behaviour plays a vital role for all students since it is closely related to their ability to achieve their goals. Positive financial behaviour can improve an individual's financial management responsibility (Chinen, Kenichiro, & Endo, 2012). Consequently, the individual's welfare can be improved and financial crisis can be avoided (Habschick, 2007; Sabri, 2014). In many cases, undergraduates face financial loss because of certain policies (OECD, 2013a, 2013b).

This research explores financial literacy, one of many factors that may influence changes in financial behaviour. The fact that financial literacy has additional application dimensions implies that individuals should have the ability and confidence to make use of their financial knowledge to make decisions. A person's financial literacy is closely related to their financial management, so the higher the financial literacy a person has, the better their financial management and vice versa. This has been empirically proven: objective financial literacy has been positively linked with responsible financial behaviour (Calver, Campbell, & Sodini, 2005; Lusardi & Mitchell, 2014). Moreover, it is emphasised that financial knowledge is the main factor that shapes financial behaviour (Gutter, 2008). Thus, it is predicted that financial literacy will be found to influence financial behaviour. However, in managing personal finances, a person needs more than knowledge of financial management. They should also have belief and confidence in their ability to manage their personal finances. This attribute is known as "self-efficacy". The general concept of self-efficacy refers to an individual's sense of self-agency, born out of the belief that they can accomplish a given task and, more broadly, cope with life's challenges. In the psychological behaviour context, an individual's self-efficacy can be identified based on personal behaviour elements such as persistence in facing obstacles, optimism or pessimism about the future, and thoughts about improving self-ability (Bandura, 2006a). Meanwhile, in the personal financial management context, it is predicted that an individual who has greater self-efficacy in financial management will see financial crisis as a challenge rather than an obstacle (Bandura, 1994). This behaviour tends to result in achievements that positively impact financial behaviour (Farrell, 2016). Dietz (2003) used financial self-efficacy as a clarified variable to explore the use of pension plans. Hence, it is predicted that self-efficacy influences financial behaviour.

This research is different from previous studies since it combines two factors that influence financial behaviour: financial literacy and self-efficacy. Moreover, methodologically, this research uses SEM (Structural Equation Modelling) analysis, which clearly explains the correlation of each variable. This differs from previous studies, which were conducted using double linear regression analysis and analysis of variance with a variable factor as a control variable. The purpose of this study is to determine the effect of financial literacy and self-efficacy on financial behaviour.

METHODS

This research employed a descriptive quantitative approach using a cross-sectional survey. Survey research is defined as the collection of information from a sample of individuals through their responses to questions (Check & Schutt, 2012). The population of this research was all undergraduates majoring in Economics Education at Sebelas Maret University (Universitas Sebelas Maret). Proportional stratified random sampling was used to determine the sample. There were 129 Economics Education undergraduates chosen as research subjects, consisting of 39 students from batch 2014, 41 students from batch 2015, and 49 from batch 2016.

The data were collected through a questionnaire that was directly given to the respondents. The collected data then were analysed using the SEM technique and LISREL 8.80 software (student edition). This use of statistical analysis enabled simultaneous correlation to be identified. SEM analysis involved five steps: (1) model specification, (2) identification, (3) estimation, (4) testing fit, and (5) re-specification.

In this research, there are three variables: two independent variables and one dependent variable. The two independent variables are financial literacy and self-efficacy while the dependent variable is financial behaviour. Financial literacy is defined as an individual's knowledge and understanding of finance which enables them to manage their finances well. This variable was measured using nine statements or items adapted from OECD (2013b). The statements or items were the respondents' responses about basic personal finance, financial management, saving, and investment.

Self-efficacy is an individual's belief about their ability to do anything related to their finances. This variable was measured by using nine statements or items adapted from Bandura (2006). The statements or items were the respondents' responses about magnitude, strength, and generality.

Meanwhile, financial behaviour generally refers to an individual's behaviour in managing their personal finances, but in this research specifically relates to an individual's behaviour in managing pocket money given to them by parents. This variable was measured using six statements or items adapted from Dew and Xiao (2011). The statements or items were the respondents' responses about financial planning, financial management and financial control. The researcher used the Likert Scale from 1 to 4 (1 for strongly disagree, 2 for disagree, 3 for agree, and 4 for strongly agree). The research design model is illustrated in Figure 1.

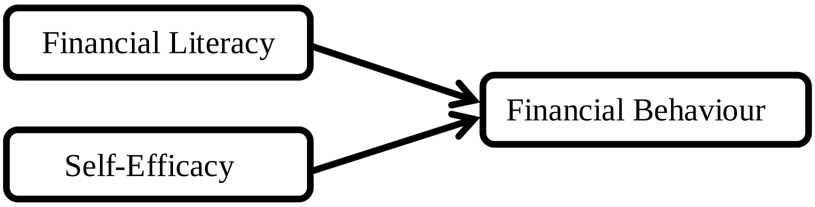

Figure 1: Research Design Model

RESULTS

The data collected from the questionnaires filled in by the respondents can be seen in Table 1. The data relates to the respondents' responses on financial literacy, self-efficacy, and financial behaviour. Undergraduates with high financial literacy are more likely to hold saving and investment products and tend to avoid debt-related products. Undergraduates with high self-efficacy are better able to manage their personal finances.

Table 1 Frequency Distribution of Questionnaire Data

No	Category	Interval	Financial Literacy		Self-Efficacy		Financial Behaviour	
			f	%	F	%	f	%
1	Strongly disagree	9-15	5	3,87	7	5,42	7	5,42
2	Disagree	16-22	25	19,37	24	18,60	22	17,05
3	Agree	23-29	69	53,48	64	49,61	67	51,93
4	Strongly agree	30-36	30	23,35	34	26,35	23	17,82
Total			129	100	129	100	129	100

Source: Primer Data

The questionnaires, distributed by the researcher and filled by the respondents, were then analysed in terms of their normality. The data are considered normal if the Skewness and Kurtosis is not significant (0.05). Based on the Skewness and Kurtosis, the data in this research are considered to have a normal distribution. Moreover, the LISREL 8.80 software analysis scatter plots show that the data are normally distributed.

The results show that the Skewness level of significance is 0.000, the Kurtosis level of significance is 0.000, and Chi-Square level of significance is 0.000. Since all of the levels of significance are below 0.05, the research requirements are fulfilled. Since the number of respondents is more than 100 (129 respondents), the data are also considered to be normally distributed. Thus, it can be concluded that the research data are in normal multivariate distribution.

After the data were found to be in normal multivariate distribution, the researcher analysed the results of the research conceptual model, as illustrated in Figure 2. Figure 2 shows the best result after the re-specification step. The results indicate that several criteria have met or passed the standard. The overall compatibility was evaluated using Goodness of Fit analyses, as shown in Table 2.

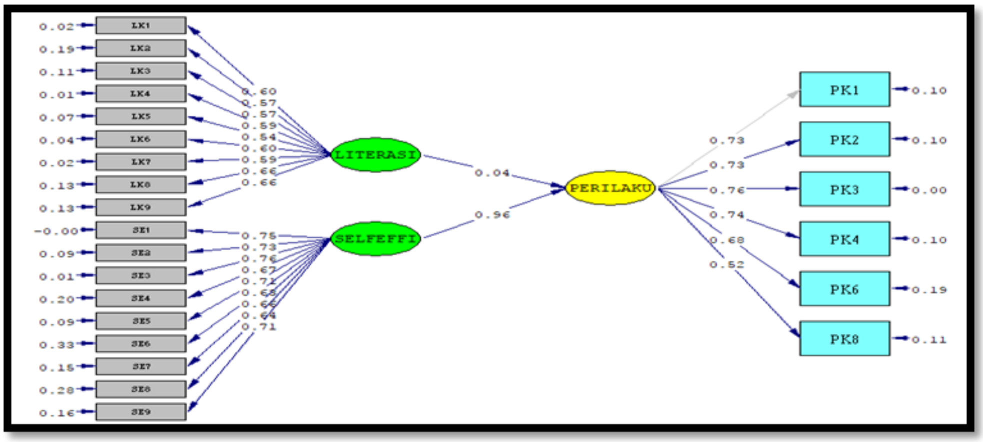

Figure 2: The Results of the Research Conceptual Model

Table 2 Goodness of Fit Analyses

Model Conformity	Coefficient	Criteria	Description
Chi-Square	198,54	Small (not significant)	Fulfilled
P-value	0,08	0,05	Fulfilled
Df	149	--	--
RMR	0,042	0,08	Fulfilled
RMSEA	0,065	0,08	Fulfilled
GFI	0,91	0,90	Fulfilled
AGFI	0,89	0,90	Marginal
CFI	0,94	0,90	Fulfilled
IFI	0,95	0,90	Fulfilled
IFI	0,96	0,90	Fulfilled
NNFI	0,96	0,90	Fulfilled

Source: Primer Data

As shown in Table 2, all analyses indicated an acceptable model fitness for the structural model. This model, hence, could appropriately explain the linear relationships between financial literacy, self-efficacy, and financial behaviour.

Once the results of the research conceptual model were found, the research hypotheses were tested using LISREL 8.80 software. The structural similarity of this research is illustrated as follows.

Behaviour = 0.040*Literacy + 0.96*Self-efficacy, Errorvar= 0.00033, R^2 = 1.00
(0.015) (0.072) (0.0016)
2.73 13.35 0.21

Based on the above structural similarity, the influences of each variable can be identified. The structural similarity is used to test the hypotheses. It is found that the t-value of financial literacy is 2.73 (higher than 1.96). This means that financial literacy influences undergraduates' financial behaviour. Another predicted hypothesis is that self-efficacy influences undergraduates' financial behaviour. As shown above, the t-value of self-efficacy is 13.35 (higher than 1.96). This indicates that self-efficacy also influences undergraduates' financial behaviour.

DISCUSSION

The statistical analysis of financial literacy shows that there is a positive and significant relationship between financial literacy and financial behaviour. The t-value of financial literacy (2.73) is more than 1.96. This significant difference, as an empirical finding, shows that undergraduates' financial literacy affects their financial behaviour. This research finding is in line with Chinen, Kenichiro and Endo (2012), who state that good financial literacy will positively affect ones' financial behaviour. Individuals who make good choices in financial matters will not have financial problems in the future. This relationship reflects a healthy financial behaviour, as well as a good ability to determine priority scales based on the needs rather than the wants of individuals. Additionally, in her research, Te'eni Harari (2016) finds that financial literacy can be used to predict financial behaviour.

Financial literacy, as a measure of financial behaviour, relates to an individual's ability to spend and manage money. More specifically, an undergraduate's financial literacy refers to their ability to deliberately think about financial choices as well as to recognise and apply relevant financial concepts.

Sabri (2014) concludes that financial education in the family and knowledge of finance have positive effects on children's attitudes in solving problems in their daily lives. Meanwhile, Carlin and Robinson (2012) find that financial education improves students' creativity in making financial choices. This creativity is very important in affecting students' financial behaviour since it enables them to make a choice between the different products and services available in the market.

These findings suggest a method of improving financial behaviour: improving the quality of financial education both in families and in schools. Education on financial management first occurs in the family as it is the smallest social unit. Improving financial education in the family can be achieved by observing family members. In order to improve financial education in schools, the quality of teaching and the learning process itself must be evaluated and improved. This can range from the quality of materials used to the socialisation of financial education and seminars on personal financial management.

Statistical analysis of self-efficacy shows that it has a positive and significant effect on financial behaviour. The t-value of self-efficacy (13.35) is more than

1.96. This statistical result, as an empirical finding, shows that undergraduates' self-efficacy greatly affects their financial behaviour.

Logically, if individuals want to manage their own finances, they must have good self-efficacy in order to face the many problems that can disturb the process of financial management. Several prior studies, especially those relating to personal finance, focus on validating financial self-efficacy as well as investigating the relationship between financial self-efficacy and psychological behaviour . Those studies have resulted in similar findings: self-efficacy has an effect on financial behaviour (Farrell, 2016 ; Gutter, 2008; Danes & Haberman, 2007).

CONCLUSION

Based on the research findings, there are several conclusions that can be drawn. Firstly, financial literacy has a positive and significant effect on financial behaviour since the t-value of financial literacy is 2.73. Secondly, self-efficacy also positively and significantly affects financial behaviour, with a t-value of 13.35. Undergraduates with high financial literacy are more likely to hold investments, save money and avoid products that are related to debt. Similarly, undergraduates with high self-efficacy exhibit better financial management.

Based on the findings, several suggestions related to financial behaviour can also be made. Firstly, the quality of the teaching and learning process in financial education at university can be improved further. The vast number of materials used in financial education will not have positive effects on undergraduates' financial behaviour if the materials are not related to personal financial management. Hence, the use of real-life cases, with a focus on personal financial management, should be implemented. Secondly, undergraduates' financial literacy can be enhanced through an effective financial education and through seminars on financial management.

The result of this research is useful as a reference for future studies to investigate other, more significant factors which shape financial behaviour, such as socio-economic status and social environment. Future studies are also encouraged to broaden the population to more than one university. Thus, the data will be more valid and reliable. Additionally, a qualitative study could be used to enrich the findings of this quantitative study.

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REFERENCE

Asian Development Bank (2013, September). Keynote speech at the ASEAN Financial Literacy Conference, delivered by ADB Vice President S. P. Groff, Bandar Seri Begawan, Brunei Darussalam.

Australian Securities and Investment Commission (2013). *National Financial Literacy Strategy* (ASIC Report No. 403). Retrieved from

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.). *Encyclopedia of human behaviour* (Vol. 4, pp. 71–81). New York: Academic Press.

Bandura, A. (2006a). Guide for constructing self-efficacy scales. In F. Pajares & T. C. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 307–337). Greenwich, CT: Information Age Publishing.

Calvet, Laurent, Campbell, J. & Sodini, P. (2005). Down or out: Assessing the welfare costs of household investment mistakes. (Harvard Institute of Economic Research Discussion Paper No. 2107). Retrieved from.

Carlin, B. I. & Robinson, D. T. (2012). What does financial literacy teach us? *Journal of Economic Education, Taylor and Francis Journal*, 43(3), 235–247.

Check, J. & Schutt, R. K. (2012). *Research methods in education*. Thousand Oaks, CA: Sage Publications.

Chinen, Kenichiro, & Hideki Endo. (2012). Effect of attitude and background on personal finance ability: A student survey in the United States. *International Journal of Management*, 1(29), 33–45.

Danes, S. M. & Haberman, H. R. (2007). Teen financial knowledge, self-efficacy, and behavior: A gendered view. *Financial Counseling and Planning*, 18(2), 48–60.

Dew, J., & Xiao, J. J. (2011). The Financial Management Behavior Scale: Development and validation. *Journal of Financial Counseling and Planning*, 22(1), 43–59.

Dietz, B. E., Carroza, M., & Ritchey, P. M. (2003). Does financial self-efficacy explain gender differences in retirement saving strategies? *Journal of Women and Aging*, 15(4), 83–96.

Farrell, L., Fry, T. R. L., & Risse, L. (2016). The significance of financial self-efficacy in explaining women's personal finance behaviour. *Journal of Economic Psychology*, 54, 85–99.

Financial Literacy and Education Commission (2011). Promoting financial success in the US: National strategy for financial literacy, US Department of the Treasury.

Gutter, M. S. (2008). Financial management practices of college students from states with varying financial education mandates. 1–20.

Habshick. (2007). *Survey of financial literacy schemes in the EU27*. Hamburg: Financial Services EVERS JUNG Research and Consulting.

Hira. (2010). The NEFE Quarter Century Project: Implications for researchers, educators, and policy makers from a quarter century of financial education, the Quarter Century Project: 25 years of research in financial education.

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44.

OECD (Organisation for Economic Development and Cooperation). (2013a). *Advancing national strategies for financial education. A joint publication by Russia G20 Presidency and the OECD*. Paris: OECD Publishing.

OECD (Organisation for Economic Development and Cooperation). (2013b). *PISA 2012 assessment and analytical framework: Mathematics, reading, science, problem solving and financial literacy*. Paris: OECD Publishing.

Sabri, M. F. & Tze Juen, T. (2014). The influence of financial literacy, saving behaviour, and financial management on retirement confidence among women working in the Malaysian public sector. *Asian Social Science*, 10(14), 40–51.

Te'eni-Harari , T. (2016). Financial literacy among children: The role of involvement in saving money. *Young Consumers*, 17(2), 197–208.