

THE ROLE OF FINANCIAL SELF-EFFICACY: MEDIATING EFFECTS OF FINANCIAL LITERACY & FINANCIAL INCLUSION OF STUDENTS IN WEST JAVA, INDONESIA

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ABSTRACT

Financial self-efficacy is an individual's belief in managing finances, using financial services and beliefs about their personal ability to achieve major financial goals. This study aims to determine the role of financial self-efficacy as a mediator between financial literacy and financial inclusion. The population of this study includes all active Telkom University students, totaling 32,358 people. This research uses quantitative methods with descriptive and causal research types. Sampling was done by using non-probability sampling method purposive sampling type, with the number of respondents as many as 100 people. The data is processed using structural equation modeling with an alternative method of partial least squares to test the effect of financial self- efficacy in mediating financial literacy and financial inclusion. Based on the descriptive analysis results, the Financial Literacy variable; Financial Inclusion; and financial self-efficacy; overall is in good category. And based on the results of partial least square analysis, it proves that financial self-efficacy is able to mediate the effect of financial literacy and financial inclusion.

Keywords: Financial literacy; Financial inclusion; Financial self-efficacy; Financial behavior.

JEL Classification Code: G02, G11, G17

INTRODUCTION

Information and communication technology is vastly developing in various sectors. Finance becomes one of the most developed sectors in adapting recent technology (Phan et al., 2020). Technology is evolving how people do financial transactions, with the aid of technology, making transactions or trade easier (Hua et al., 2019). Technology development within the financial sector offers multiple variations of financial products. Financial transactions using applications become something regularly accessed by people (Yao et al., 2018). Convenient and easiness offered by financial providers tend to create consumptive habits among their customers and shift their saving habits (Zahra & Anoraga, 2021). The World Bank data shows that the ratio of Gross National Savings per GDP of Indonesia in 2019 was 31.01 percent. This ratio is below Thailand, which was 31.48 percent, and Singapore at 42.83 percent. However, there is an

increasing interest in saving, even though Indonesia is still relatively low compared to Thailand and Singapore.

Through The Financial Services Authority, the Indonesian government is increasingly active in launching financial literacy programs for the Indonesian people. Financial literacy has now become a global issue. Atkinson and Messy (2013) say that financial literacy and financial inclusion are important pillars in strengthening financial services. In 2013, the President of the Republic of Indonesia launched the National Strategy for Indonesian Financial Literacy (SNLKI) as part of the Trilogy of Policy Instrument in order to increase public trust (market confidence) and equality of consumers and the financial services industry (level playing field). There have been dynamics in the last few years, namely the rapid advancement of information and communication technology, shifting people's preferences, and the increasing complexity of financial products and services. The 2019 National Financial Literacy and Inclusion Survey results show that only 38.03% of Indonesians have adequate knowledge, skills, and confidence regarding financial products and services (Well Literate). This number increases over previous survey results; 2016: 29.7%; and 2013: 21.84%. These numbers implicate the poor understanding of financial literacy. Furthermore, according to the 2019 National Survey of Financial Literacy and Inclusion, 76.19% of Indonesians have used financial products and services.

The role of financial self-efficacy in increasing financial literacy and financial inclusion is needed, especially at productive age. Financial self-efficacy is an individual's belief in managing finances, using financial services and beliefs about their personal ability to achieve major financial goals (Asebedo & Payne, 2019). Financial self-efficacy is one of the keys to financial success because it will improve proper money management (Kim et al., 2020). Based on the phenomena that most Indonesian student in a university is not well literate with financial self-efficacy, it is interesting to do a further research on how the role of financial self-efficacy as a mediator of financial literacy and financial inclusion in Telkom University students in west java, Indonesia.

LITERATURE REVIEW

Financial Literacy

Financial literacy can be perceived differently for each person, as shown by the many meanings found in the literature. Several concepts mention that it includes an ability to be aware of economics conditions and circumstances that influence household decisions. For others, it focuses on the fundamentals of money management: budgeting, saving, investing, and insurance. Some expressions are used interchangeably across the board. In this regard, there are another definitions for financial literacy.

When comparing various concepts for financial literacy, it comes across as being overlap or sometimes the concept of financial literacy perceived as financial education and financial capacity, resulting in uncertainty (Saeedi & Hamedi, 2018). However, the OECD has the easiest and well-defined concept that says financial literacy is the knowledge and the ability to apprehend about financial concepts and risks, as well as the capacity, encouragement, and feel confidence to incorporate such knowledge in order to create successful result across a variety of financial contexts, eventually strengthening individuals' and society's financial wellbeing and enabling participation in economic life.” (OECD, 2012). Financial literacy originated in the

United States of America with the Smith-Lever Act. The Smith-Lever Act established the Cooperative Extension Service in the United States of America in 1914 that bring forth a chance to learn and help people gain the required financial skills to apply at their home, environment, and society. Since then, several campaigns aimed at assisting individuals with their finances have taken place worldwide. However, the idea of financial literacy emerged primarily due to the financial markets' liberalization or deregulation in 1998. As a result, the OECD launched the first international campaign aimed at enhancing financial literacy. It launched an intergovernmental project in 2003 to develop universal financial literacy values and identify methods to strengthen financial literacy standards. For this reason financial literacy is gaining traction in various economies, as it is recognized as a necessary component of financial stability, financial inclusion, and the efficient operation of financial markets (The World Bank, 2013).

There isn't any standard definition of financial literacy, even though many definitions have been suggested. However, according to the picture in Figure 1, it presents conceptual framework of financial literacy, which is described as a measure of an individual's ability to comprehend and apply personal finance knowledge. This definition is concise, does not contradict other literature concepts, and is consistent with other standardized literacy constructs.

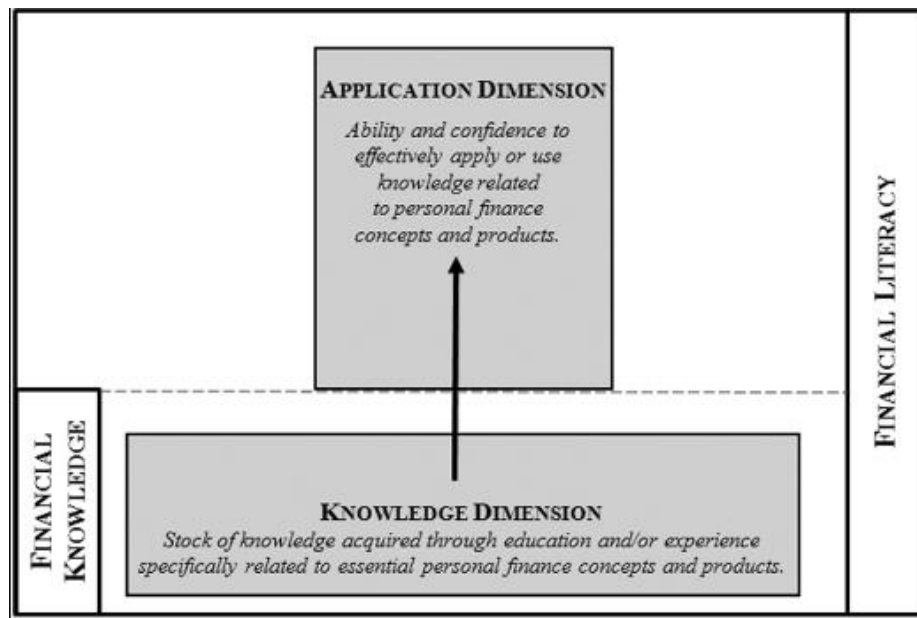


FIGURE 1

CONCEPT OF FINANCIAL LITERACY

H1: Financial Literacy has a significant impact against financial self-efficacy.

Financial Inclusion

Financial inclusion is described simply as equal access to and use of high-quality financial services that are responsibly offered (Sarma & Pais, 2011). Financial inclusion aims to put the financially excluded under the protection and enhancement of welfare by bringing them under the umbrella of formal financial services (Zins & Weill, 2016).

Financial inclusion refers to the provision of financial goods and services to those who currently lack access. On the other hand, financial exclusion occurs to a person who does not have access to financial services such as a bank account, credit loan, cooperative, or even a microfinance institution (Ozili, 2020).

Financial inclusion in its most formal form includes access to credit, savings products, microinsurance, and payment services (Ali et al., 2020). Financial inclusion has a variety of beneficial effects, as shown in Figure 2.



FIGURE 2

OUTCOMES OF FINANCIAL INCLUSION

Multiple evidence exhibit to emphasize how access to financial services can affect social and economic outcomes within the household or industrial firms. Financial inclusion theory starts to grow as well as provide an impact on economic development. Anwar et al. (2016) bring up research results that present a significant and positive impact on how financial inclusion applies to investment in Indonesia. Meanwhile, Park & Mercado (2016) conduct another research and enlarge the research coverage inside Asian economies to test the impact of Financial Inclusion (FI) against income inequality and poverty and discover how the result connected and provided significant positive results. Another research from Demirgüç-Kunt and Klapper (2012) argued that well-functioning financial structures are critical for providing financial products such as investment, credit, payment, and risk management to people with various needs. Financial structures that organize carefully can help poor and vulnerable people obtain more equitable access to appropriate financial services.

H2: Financial Literacy has a significant impact against financial inclusion

Financial Self-Efficacy

The social cognitive theory describes how cognitive guidance inside an individual mind determines individual's motivation and financial behavior which connect to financial self-efficacy (Sandler, 2000). Financial Self-Efficacy (FSE) is linked with financial context, which measures level of individual's trust to use financial services. FSE generally predicts the ability of an individual to use and access financial services. Multiple research proposes the concept of relatedness between self-efficacy and financial wellbeing. Tokunaga (1993) gave a conclusion about financial self-efficacy as a missing point to connect between personal knowledge and the success of achieving financial targets. Another researcher implies that teenager with financial knowledge who has self-efficacy can behave differently in managing their finance (Danes & Haberman, 2007). Ozmete and Hira (2011) examine how behavioral theory affecting financial behavior. They establish that in different environments, self-efficacy plays a vital role in

changing financial behavior. The condition applies when a consumer with high level of self-efficacy are more confident to choose financial products and services by themselves.

H3: Financial self-efficacy has a significant impact against financial inclusion

H4: Financial self-efficacy has a mediation role between financial literacy and financial inclusion.

RESEARCH METHODS

The research is conducted within this framework to explore and obtain results to answer the research hypotheses (Figure 3).

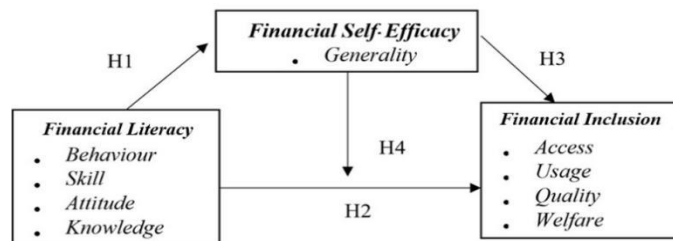


FIGURE 3

RESEARCH FRAMEWORK

RESULTS AND DISCUSSION

Outer Model Analysis

PLS (Partial Least Squares) parameters can be classified into the following categories: The first group refers to the weight estimate that was used to generate a latent variable number. The second represents the estimated path between the latent variable and its indicator of block (loading). The third group is for indicators and latent variables' means and parameter positions (constant regression values) (Figure 4).

The outer model is analyzed to ensure the calculation is accurate and consistent. It defines the relationship between latent variables and their indicators in the study of this model. Numerous measures provide insight into the outer model's analysis:

First, convergent validity is determined by the correlation between the item/component score and the construct score, as indicated by the standardized loading factor, which defines the correlation between each measurement item (indicator) construct. For example, individual reflexive measures are considered high if correlated > 0.7 with the construct to measure, the outer loading value between 0.5-0.6 is considered sufficient. It was found that the outer loading

value for the items studied was above 0.7. Thus, it can be said that the items under study have good convergent validity (Table 1).

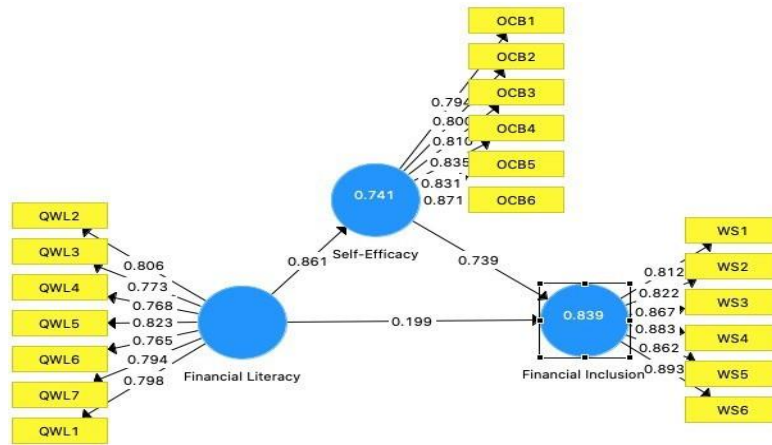


FIGURE 4
PATH DIAGRAM

Variable	Indicator	Loading factor	Output
Financial Literacy	K1	0,794	Valid
	K2	0,800	Valid
	K3	0,728	Valid
	K4	0,843	Valid
	K5	0,663	Valid
	K6	0,758	Valid
	K7	0,896	Valid
	K8	0,778	Valid
	K9	0,758	Valid
	K10	0,686	Valid
Self-Efficacy	E1	0,603	Valid
	E2	0,717	Valid
	E3	0,732	Valid
	E4	0,794	Valid
	E5	0,721	Valid
Financial Inclusion	I1	0,610	Valid
	I2	0,550	Valid
	I3	0,697	Valid
	I4	0,642	Valid
	I5	0,621	Valid
	I6	0,654	Valid
	I7	0,700	Valid
	I8	0,678	Valid
	I9	0,611	Valid
	I10	0,644	Valid

Second, discriminant validity refers to a measurement model that includes a reflexive predictor that is evaluated by cross-loading the measurement against the construct. If the correlation between the construct and the measurement object is greater than the correlation between the other constructs, it indicates that their block size is superior to the other blocks. Correlation coefficients for the values of the tested variables are greater than 0.5. Thus, it is determined that all variables examined in this analysis possess strong discriminatory abilities (Table 2).

Variable	AVE	CR	Output
Financial Literacy	0,624	0,921	Reliable
Financial Inclusion	0,734	0,943	Reliable
Financial Self-Efficacy	0,511	0,806	Reliable

Inner Model Analysis

The results of the Inner Model Analysis test show the following results:

Hypothesis	Correlation	Path Coefficient	P-Value	Output
H1	Financial Literacy against Financial Self-Efficacy	0,861	0,000	Valid and significant
H2	Financial Literacy against Financial Inclusion	0,199	0,087	Valid, not Significant
H3	Financial Self-Efficacy against Financial Inclusion	0,739	0,000	Valid and significant

Hypothesis testing: Based on the results of research using the SmartPLS software in table 3, it is stated that: H1 is accepted. There is a significant direct effect between Financial Literacy on Financial Self-Efficacy; H2 is rejected. There is a direct and insignificant effect between Financial Literacy and Financial Inclusion; H3 accepted. There is a significant direct influence between Financial Self-Efficacy on Financial Inclusion.

Meanwhile, the H4 mediation effect result describes as follows:

Hypothesis	Correlation	Path Coefficient	P-Value	Output
H4	Financial Literacy against Financial Inclusion with mediating variable Financial Self-Efficacy	0,636	0,000	Valid and significant

Based on Table 4, where the p-value is obtained of 0,000, it is smaller than the significant limit of 0.005. Nevertheless, the result shows that the hypothesis is accepted, so there is a significant effect of self-efficacy on financial inclusion. Furthermore, the path coefficient shows

a positive number, meaning that financial self-efficacy partially mediates the effects of financial literacy and financial inclusion.

CONCLUSION

The results of this study state that (H1) financial literacy has a significant effect on financial self-efficacy, (H2) financial literacy has no significant effect on financial inclusion, (H3) financial self-efficacy has a significant effect on financial inclusion, and (H4) financial self-efficacy is partially able to mediate the effect of financial literacy and financial inclusion.

Companies and financial institutions should pay attention and increase the affordability of service and product costs to expand consumer demographics. Because based on research results, there is great interest but constrained by the low purchasing power of a consumer demographic, they are reluctant to use the services and products they are interested in. Regulators such as the Bank of Indonesia, Financial Authority Services (OJK), and related institutions should provide incentives to financial institutions that also seek to increase public awareness of the concepts of financial self-efficacy, financial literacy, and financial inclusion. Regulators such as the Bank of Indonesia, Financial Authority Services (OJK), and related institutions should take a closer look at regulations related to the affordability of service fees and financial products. The high cost of financial services and products could be an obstacle to several potential consumers. It may be possible to apply simplification or elimination to regulations and other artificial restrictions that affect the prices of financial services and products.

REFERENCES

- Ali, A. E., Ali, K. M., & Azrag, M. H. (2020). *Enhancing Financial Inclusion through Islamic Finance, Volume II*. Cham, Switzerland: Springer International Publishing.
- Anwar, A., Uppun, P., Tri, I., & Reviani, A. (2016). The role of financial inclusion to poverty reduction in Indonesia. *Journal of Business and Management (IOSR-JBM)*, 18(6), 37-39.
- Asebedo, S., & Payne, P. (2019). Market volatility and financial satisfaction: the role of financial self-efficacy. *Journal of Behavioral Finance*, 20(1), 42-52.
- Atkinson, A., & Messy, F. (2013). Promoting financial inclusion through financial education: OECD/INFE evidence, policies and practice. *OECD Working Papers on Finance, Insurance and Private Pensions*, 34, <http://dx.doi.org/10.1787/5k3xz6m88smp-en>.
- Danes, S. M., & Haberman, H. R. (2007). Teen Financial Knowledge, Self-Efficacy, and Behavior: A Gendered View. *Journal of Financial Counseling & Planning*, 18, 48-60.
- Demirgüç-Kunt, A., & Klapper, L. (2012). *Measuring financial inclusion: The global finindex database*. The World Bank.
- Hua, X., Huang, Y., & Zheng, Y. (2019). Current practices, new insights, and emerging trends of financial technologies. *Industrial Management & Data Systems*, 119 (7), 1401-1410.
- Kim, Y. K., Lim, Y., Maleku, A., Kagotho, N., & Yang, M. (2020). Financial stress and depression among african refugees in the southern united states: A serial multiple mediation analysis of financial self-efficacy and financial anxiety. *Journal of Immigrant & Refugee Studies*, 18(2), 151-171.
- OECD. (2012). *PISA 2012 Assessment & Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy*. Paris.
- Ozili, P. K. (2020). Financial inclusion research around the world: A review. *Forum for social economics* (pp. 1-23). Routledge.
- Ozmete, E., & Hira, T. (2011). Conceptual analysis of behavioral theories/models: Application to financial behavior. *European Journal of Social Sciences*, 18, 386-404.
- Park, C. Y., & Mercado, R. (2016). Financial inclusion, poverty, and income inequality in developing Asia. *Asian*

- Development Bank Economics Working Paper Series*, 426.
- Phan, D. H., Narayan, P. K., Rahman, R. E., & Hutabarat, A. R. (2020). Do financial technology firms influence bank performance? *Pacific-Basin finance journal*, 62, 10120.
- Saeedi, A., & Hamed, M. (2018). *Financial Literacy: Empowerment in the Stock Market*. Switzerland: Springer International Publishing.
- Sandler, M. E. (2000). Career decision-making self-efficacy, perceived stress, and an integrated model of student persistence: A structural model of finances, attitudes, behavior, and career development. *Research in Higher Education*, 41, 537-580.
- Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of international development*, 23(5), 613-628.
- The World Bank. (2013). *Why Financial Capability Is Important and How Surveys Can Help Responsible Finance*.
- Tokunaga, H. (1993). The use and abuse of consumer credit: Application of psychological theory and research. *Journal of Economic Psychology*, 14, 285-316.
- Yao, M., Di, H., Zheng, X., & Xu, X. (2018). Impact of payment technology innovations on the traditional financial industry: A focus on China. *Technological Forecasting and Social Change*, 135, 199-207.
- Zahra, D. R., & Anoraga, P. (2021). The Influence of Lifestyle, Financial Literacy, and Social Demographics on Consumptive Behavior. *The Journal of Asian Finance, Economics, and Business*, 8(2), 1033-1041.
- Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of development finance*, 6(1), 46-57.