Determinants of Digital Financial Literacy for Young Adult Generation in Indonesia

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ABSTRACT: Industry 4.0 has greatly facilitated the adoption of Digital Finance Inclusion (DFI) in Indonesia. Consequently, DFI providers need to investigate the many variables influencing DFI users to understand their consumers better. The primary step in comprehending the initial hurdles for DFI is through DFL (Digital Financial Literacy). This study aims to identify, quantify, and authenticate the factors that influence Digital Financial Literacy (DFL) among Indonesian people who engage in fintech services. In 2023, 225 adult fintech users in Indonesia were polled via a self-administered survey. The findings demonstrate that there are 11 factors that influence DFL among adults in Indonesia. This study generated unique contributions by emphasizing critical parameters that offer solutions for assessing digital financial literacy that can serve as a foundation for constructing a digital financial literacy index. Therefore, the study shows that a deep foundational understanding of DFL is necessary to utilize DFS efficiently.

KEYWORDS: Digital Financial Literacy, Young Adult Generation, Indonesia

I. INTRODUCTION

Further rapid development of financial services digitization along with the growth of technological disruptions held significant contribution to the abundance of new and novel Digital Financial Services (DFS) to the market (Alliance for Financial Inclusion, DFSWG, and CEMCWG, 2021). Individuals, businesses, and families nowadays employ digital financial services to further execute their financial matters, such as in the way how they deal with payments, borrow money, settle financial transactions, gain financial items, invest, and circulate money (Yang et al., 2021). Digital financial services gave boost to the growth of financial inclusion to the overall society, including for financially excluded individuals, by surpassing the hurdles that hinder them (Alliance for Financial Inclusion, DFSWG, and CEMCWG, 2021). The number of people using digital financial services is soaring and have grew more prevalent in the past few years through the launch of revolutionary digital financial products and services (such as virtual banking, Application Programme Interfaces (APIs), alternative credit scoring mechanisms, digital lending, and so on) to integrate the economy (OECD, 2018). Separately from the palpable benefit that may stem from the practice of digital financial services, it convey numerous hurdles to their peers, in which it put their users to danger when they seek to make use of digital financial services such as the danger of identity theft, privacy concerns, unregulated service providers, security concerns, low digital literacy, low financial literacy, and a shortage of awareness regarding DFS (Alliance for Financial Inclusion, DFSWG, and CEMCWG, 2021).

Digital Financial Literacy (DFL) is an indispensable footing that contribute to an effective utilisation of Digital Financial Services (DFS), and nowadays it serve as an essential part of education for the society (Morgan et al., 2020). DFL is defined as being "financially literate on digital platforms", as mentioned by Lyons & Kass-Hanna in their previous study (2021a). Assessment to measure digital financial literacy (DFL) level can be derived from the integration of their financial literacy and digital literacy indicators. financial literacy (FL) is raised toward as an alertness of financial products and services, in addition to the capacity to apply financial knowledge and skills to manage financial resources with the objective to attain exceptional financial health (Xiao et al., 2014). Meanwhile, In simple terms, digital literacy suggests a capacity to use digital technology (Alliance for Financial Inclusion, DFSWG, and CEMCWG, 2021).

The lack of DFL hampers the rational and effective adoption of digital financial services. Even a person with a reasonable amount of financial literacy is unable to utilise digital financial services unless he or she is digitally literate. To make the most of digital financial services, individuals must meet criteria both digitally and financially literate. In other words, digital financial literacy

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is essential for the utilisation and accessibility of digital financial services. Research indicates that users have low financial literacy, limited awareness of DFS, low or no digital literacy, and distrust of DFS (Alliance for Financial Inclusion, DFSWG, and CEMCWG, 2021; Azeez & Akhtar, 2021; Bansal, 2019; Lyons & Kass-Hanna, 2021a; Prasad et al., 2018). Aside from these, a number of other factors influence adults' digital financial literacy. The accessible nature of digital financial services permits users to benefit from various financial services without experiencing to travel directly to the financial services provider's office, of which may accelerate up services to consumers and potentially reduce operational costs for financial services companies, particularly banks. In recent years, individuals have become more inclined to capitalise on digital money with transaction payment systems that require no real cash to engage with hundreds of thousands of online and offline retailers. This non-cash payment has many perks, notably for the digital generation, or Generation Z, that are more proficient with technology than previous generation. Hence therefore, the purpose of this study serves to determine, assess, and evaluate the determinants of DFL among adult DFS users in Indonesia. subsequently the study's findings will assist digital financial service providers achieve expanding their knowledge of their clientele.

II. LITERATURE REVIEW

A. Financial Literacy

Having an initial basic understanding of the importance of financial concepts, along with the ability to apply numerical skills to solve any financial situations, permits consumers to accomplish their goals in finance independently while at the same time provide an aptly respond to financial news and events (Morgan & Trinh, 2017). Financial literacy is deemed as an essential skill that need to be acquired for fostering financial inclusion and further development, and thus led to the accomplishment of overall financial stability (Ramakrishnan, 2011). Educated investors are in favour to mitigate their risk portfolios by performing a diversify strategy across various ventures (Abreu & Mendes, 2010). Mahdzan and Tabiani (2013) stated that by enhancing the level of financial literacy and financial capability of an individual may leads to more sounding financial decisions, along with further facilitating an effective planning and management strategy to any significant life events such as children education planning, homeownership planning, and retirement planning.

Financial knowledge and financial literacy are heavily related, but these two concepts are not really identical, however it is aligned together harmoniously, in which financial knowledge held significant position as key component of financial literacy (Huston, 2010). There are five main aspects that contribute to the definitive concept of financial literacy, as stated previouly by Remund (2010), which are : (1) the ability to gather an understanding of financial concepts, (2) the ability to discuss further and elaborate on any financial matters, (3) the skills to manage personal financials, (4) the capacity to make depth and sound financial decisions, and (5) the confidence to plan a thorough financial needs for the future. Till this day, there is currently no standardized method to measure financial literacy or financial knowledge, thus provide certain gaps that can be investigate further. Nonetheless, research indicates that a lack of financial literacy is a growing issue in the many countries around the globe, including Indonesia. The literature review shows that "financial literacy" and "financial knowledge" are often used interchangeably, but current studies emphasize that they are not identical. To be considered financially literate, an individual must be able to utilize personal finance knowledge to make informed financial decisions.

B. Digital Financial Literacy

Digital Financial Literacy (DFL) merges financial literacy with financial capability, encompassing the knowledge, skills, confidence, and competence needed to use digital financial services and products securely. Positioned at the intersection of digital literacy and financial literacy, DFL empowers users to fully benefit from digital finance, promoting regular adoption in their daily activities. DFL involves financial activities that utilize digital technologies such as electronic money, mobile financial services, internet financial services, and branchless banking, offered by both banks and non-bank institutions. DFL connects shopping and saving systems through online payments. Therefore, DFL can be described as the knowledge, skills, confidence, and competence to effectively use digital financial products and services to make informed financial decisions..

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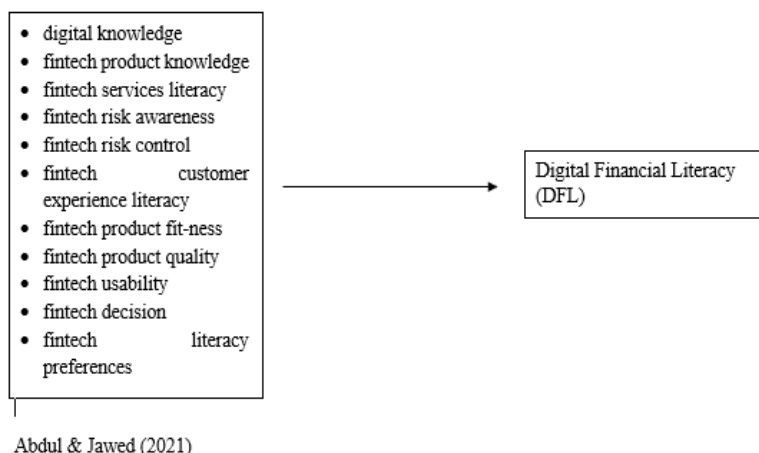

Abdul & Jawed (2021)

Figure 1. Thinking Framework

III. RESEARCH METHODS

The research employed a quantitative methodology, explicitly utilizing a descriptive research approach. The acceptance model and technology usage are the independent variables in this research, whereas the dependent variable is the behavioural intention to use. A well-structured questionnaire adapted from previous study by Sembel & Deliyana (2023) was prepared and circulated online using google forms with adults who use DFS. An online questionnaire was circulated with 275 adults and 225 questionnaires were filled out by the respondent and were used for the analysis (response rate 81,2%). The attributes of the participants in this study are: The participants in this study consist of persons who are part of the young adult generation in Indonesia, specifically those who fall within the Generation Z and Generation Y cohort (born between 1984 and 2004 and are currently between the ages of 28 and 17), with knowledge about the presence of Fintech in Indonesia and actively utilize Fintech services. The research used the Structural Equation Modeling-Partial Least Square (SEM-PLS) analysis technique, utilizing the SmartPLS 4.0 tool for data processing. Structural equation modelling (SEM) employing partial least squares (PLS) is employed to examine the predicted association between constructs by assessing the presence of a relationship or effect among the research variables or the research hypothesis under investigation (Ananto et al., 2022).

IV. RESULTS AND DISCUSSION

Table 1 displays descriptive statistics for respondents of this survey, with the majority of the respondents are female with age 17-25 years old (78,79%), followed with men with age 17-25 years old (72,04%). Based on marital status, Table 1 displays wide disparities between our single and wedded respondents between ages 17-23 years old (2,63% for single and 90,91% for wedded respondents), followed with peers within age cohorts 29-39 years old (0,53% wedded respondents and 84,21% single respondents) that behave reversely. Lastly, based on educational level, the majority of the respondents are undergraduate program (77,09%; 17-23 years old) followed with graduate program (66,67%; 29-39 years old).

Table 1. Respondents Characteristics

	Sex		Marital Status		Education		
AGE	Men	Female	Married	Single	Senior High / Junior High School	Undergraduate Program	Graduate Program
17-23 years old	67 (72,04%)	104 (78,79%)	170 (90,91%)	1 (2,63%)	32 (74,42%)	138 (77,09%)	1 (33,33%)
23-28 years old	10 (10,75%)	11 (8,33%)	16 (8,56%)	5 (13,16%)	3 (6,98%)	18 (10,06%)	0 (0,00%)
29-39 years old	16 (17,20%)	17 (12,88%)	1 (0,53%)	32 (84,21%)	8 (18,60%)	33 (12,85%)	2 (66,67%)
Total	93	132	187	38	43	179	3

Evaluating a measurement model involves an essential phase called outer model assessment. Examining the correlation between unobserved variables and their observable indicators is linked to the measurements of the outer model. The validity and reliability of the measurement model are assessed through testing. Validity was assessed through the implementation of

convergent and discriminant validity tests. The convergent and discriminant validity tests assess the loading factor and AVE values. In addition, a reliability test was conducted by examining composite reliability and Cronbach alpha. The study rigorously examined all indicators for their convergent validity and reliability, as highlighted in Table 1.Table 2 indicates that all indicators have values greater than 0.7, indicating that the outer model is valid according to the convergent validity of the loading factor (Ghozali & Kusumadewi, 2023). All variables in this study have an average value over 0.5, indicating that they are valid and pass the convergent validity test. A construct can be deemed reliable if it exhibits a Cronbach alpha and composite reliability value exceeding 0.7 (Ghozali, 2014). Based on the SEM-PLS analysis, all variables exhibit a composite reliability value and a Cronbach alpha value over 0.7, indicating a high level of construct reliability.

Table 2. SEM-PLS Results

Construct(s)	Item(s)		Loading Factor (s)	VIF	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Digital knowledge	DK1	I can search online using my digital devices	0,912	3,857			
					0,901	0,932	0,774
	DK2	I can send and receive emails myself	0,901	3,420			
	DK3	I once shopped online	0,913	3,520			
	DK4	I use mobile banking	0,787	1,696			
Fintech product knowledge	FK6	Suppose you receive 8% interest on bank deposits, when the inflation rate reaches 6%, then the effective rate of return (interest) is 6%	0,887	1,411			
					0,701	0,870	0,770
fintech services literacy	KDFS1	I know how to pay using e-money (such as Gopay, Dana, OVO and so on)	0,867	1,411			
	KDFS2	I know how to trade financial securities digitally	1	1	1	1	1
	KDFS3	I know how to do online lending (such as Peer to Peer lending, crowdfunding and so on)	1	1	1	1	1
fintech risk awareness	RADF2	I know how to protect myself from any digital risks, such as phishing and spyware	0,805	1,304			
					0,721	0,840	0,638
	RADF3	I never share my one-time password with anyone.	0,856	1,751			
	RADF4	I never share my username, password and PIN with anyone.	0,730	1,513			
fintech risk control	RCDF1	I prefer to do my financial transactions digitally, rather than with the conventional way	0,873	2,899			
					0,900	0,930	0,769
	RCDF2	I can initiate and complete my own digital financial transactions	0,885	2,882			
	RCDF3	I can resolve any errors that might occur while I perform my financial transactions digitally	0,891	2,983			
	RCDF4	Repeated usage of digital financial products and services makes me confident and error-free	0,860	2,519			

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Construct	Code	Item					
Fintech customer experience literacy	KCJTOT	I know how to approach the right forum, should I fall victim to any digital risks related to my financial transactions	0,903	2,603			
					0,862	0,916	0,785
Fintech product fitness	PS1	I find digital financial products/services that well-suited my financial needs	0,903	2,616			
	PS2	I find digital financial products/service that can facilitates my financial goals.	0,851	1,841			
	PS3	Tailored digital financial products/services are readily available in the market	0,750	1,587			
					0,794	0,866	0,619
Fintech product quality	PSQ3	Digital financial service providers provide all relevant information about digital financial services	0,780	1,679			
	PSQ4	I have an extensive variety of digital financial products/ services.	0,821	2,903			
	PSQ5	I manage my personal finances daily	0,795	2,746			
	PSQ6	I set my personal financial goals	0,740	1,182			
					0,779	0,872	0,696
fintech usability	PICK1	I can choose what type of digital financial products/services that corresponds with my financial goals.	0,880	4,004			
	PICK2	I can select the precise Digital Financial Service Provider.	0,875	3,980			
	PICK3	I want to use my best knowledge on financial and digital aspects by using the correct digital services.	0,799	1,834			
					0,812	0,877	0,640
	PICK4	I feel pleased when initiating and completing digital financial service transactions.	0,864	2,098			
fintech decision	DM1	I want to practice positive financial behaviours such as responsible borrowing, emergency plan saving, and so on.	0,764	1,526			
	DM2	I have not once borrowed money at an abnormal interest rate, even when the situation required me to	0,770	1,574			
fintech literacy preferences	SIAKS1	I am pleased to carry out my l financial transactions digitally	0,864	1,887			
					0,806	0,885	0,720
	SIAKS2	I prefer digital financial transactions because they give me rewards, incentives, cash back and other benefits.	0,877	1,835			
	SIAKS3	By using digital services, I can make other people see me positively	0,804	1,602			

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Based on Table 3 below, the r square value for the digital financial literacy variable is more than 90.2 per cent. This result shows that digital financial literacy has a substantial r-square value. The results show that the identified indicators are able to explain the predictive model of digital financial literacy more than 90.2 per cent, and the remaining 9.8% is explained by other constructs outside of this research.

Table 3. Coefficient of Determination (R²)

	R Square	R Square Adjusted
DIGITAL FINANCIAL LITERACY	97,09%	96,94%

Table 4 below represent the Goodness of Fit test result. With small number of SRMR (0,082 which is less than 0,1) along with the value of Q2 value which is higher than 0,5 (1682,976) indicates that the predictive relevance value of the model in this study is deemed satisfactory.

Table 4. Goodness of Fit

	Saturated Model	Estimated Model
SRMR	0,082	0,082
Chi-Square	1682,976	1682,976

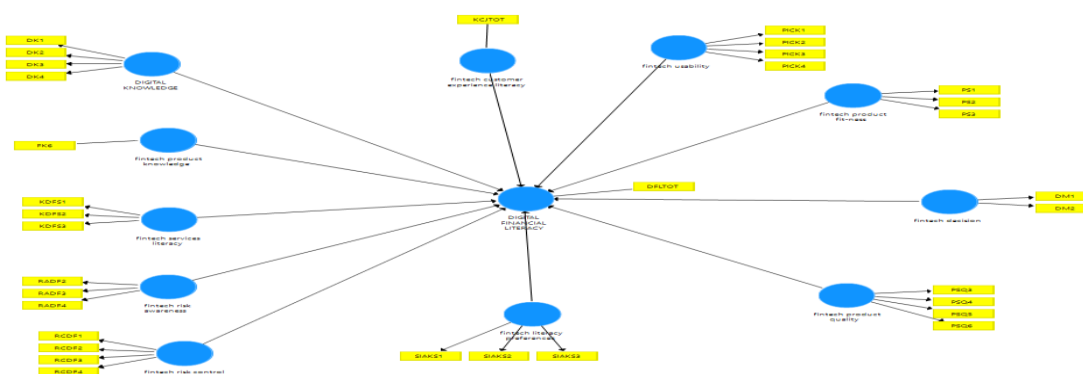Source: Researchers Processes, 2023

Figure 2. SEM-PLS Model

IV. CONCLUSION

In recent years, individuals have become more inclined to capitalise on digital money to engage with their daily financial transactions. The flexibility of non-cash transactions has many perks, especially to the young adults' generation who are more technology savvy compared to their predecessors. Objectives of this study are to determine the major key findings to digital financial literacy among the young adults' generation with age gap from 17-41 years old. Findings from questionnaire datasets from 225 respondents in Indonesia covered nine key factors that hold the important position to describe the digital financial literacy among the young adults, and thus serves as main theoretical contribution of this study. Furthermore, the practical contribution of this study focused on identifying essential findings that can be recommend to the fintech services to enhance their customer insights in relate to the topic of digital financial literacy.

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