



Exploring Digital Financial Capability: Evidence From Gen-Z In Surabaya

Pedro Rezo Santoso ¹, Yuanita Ratna Indudewi ²

^{1,2)} Universitas Ciputra Surabaya

Email: ¹⁾ psantoso@student.ciputra.ac.id, ²⁾ febe.yuanita@ciputra.ac.id

How to Cite :

Santoso, R, P., Indudewi, R, Y. (2025). Exploring Digital Financial Capability: Evidence From Gen-Z In Surabaya. EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 13(2). DOI: <https://doi.org/10.37676/ekombis.v13i2>

ARTICLE HISTORY

Received [06 November 2024]

Revised [22 February 2025]

Accepted [22 March 2025]

KEYWORDS

Digital Financial Literacy, Digital Financial Capability, Motivation Factor, I-Change Model, KAB Theory.

This is an open access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license



ABSTRACT

This paper explores the financial capability (DFC) of Gen Z in the digital era. Given the rise of digital financial service use during COVID-19, many individuals still lack the necessary skills to manage their finances effectively. The objective of this paper is to examine whether digital financial literacy (DFL) has a significant impact on DFC, with the mediation of digital financial attitude (DFA), financial self-efficacy (FSE), and digital skills (DS). An exploratory was employed, with 98 valid responses from Gen Z participants collected via Google Form. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that DFL has a significant positive effect on DFA and FSE, which in turn positively influence DS. Moreover, DS is found to significantly enhance DFC, establishing the importance of digital skills in the financial domain. These findings underscore the necessity of integrating digital financial education and skills training into programs targeting Gen Z. The study highlights the crucial link between financial literacy and capability in the digital age, suggesting avenues for future research and policy development to enhance financial inclusion and literacy.

INTRODUCTION

Technology has become a prominent part of human activities and business industries in this age, particularly because it brings positive development and aids in accomplishing difficult tasks (Lesmana et al., 2024). As technology advances rapidly, it emerges as an essential foundation for the nation's economic growth (Nurhayani et al., 2024). Nonetheless, the COVID-19 outbreak played a significant role in expanding the accessibility and utilization of digital financial services (DFS) (Uthaileang & Kiattisin, 2023). Demirgüç-Kunt et al. (2022) highlighted that 20% of adults in developing economies made a merchant payment digitally, two-fifths of which did so for the first time. Under this circumstance, mobile applications have been mostly used to perform financial transactions to reduce physical contact during offline transactions. Subsequently, the spread of other DFS, namely online loans, online investments, e-money, neobanks, and others, has escalated (Ignatyuk et al., 2020).

Indonesia is evidence of these changes and is now a nation that has turned digital wallet usage into a trend (Nurhayani et al., 2024). 63.6 million, or 25.6% of Indonesians, use mobile wallets as of 2020 (Boku, 2021). The Central Bank of Indonesia (BI, 2021) reported an increase in the year-on-year volume of e-money and digital banking transactions in May 2021 by 57.38% and 56.49%, respectively. Furthermore, the Financial Services Authority (OJK, 2022) showed an increase in Indonesia's financial inclusion index to 85.10%, while only 49.68% of Indonesians are financially literate. With half the population of Indonesia still lacking financial literacy, their aptitude could be affected. Scholars revealed that financial knowledge positively correlates with the ability to efficiently perform financial tasks, thus indicating financial capability as an outcome of financial literacy (Tahir et al., 2021). For instance, online loans and investments are notoriously misused by people. Gen Z and Millennials are vulnerable to online loans and fraudulent investments due to their principles of you only live once (YOLO) in promoting consumptive behavior and fear of missing out (FOMO), which influence financial decision-making without having sufficient knowledge (Kurnia, 2024). Based on OJK's Information Technology-Based Joint Funding-Services Statistics (LPBBTI) statistics, Rp59.32 trillion of outstanding loans were received by personal borrowers in May 2024, with a group aged 19-34 dominating the outstanding loans at Rp28.6 trillion and non-performing loans (NPL) or 90 days overdue at Rp733 billion (OJK, 2024). In comparison to the 5-year prior data in May 2019, the total outstanding loans were only Rp8.31 trillion (OJK, 2019).

While research about financial literacy has been conducted multiple times in the past, the technological aspect, especially concerning capabilities, is still rarely present. Although financial literacy is useful, it is inadequate since participation in economic life also requires competency, which involves the ability and opportunity to act (Johnson & Sherraden, 2007; Sherraden, 2013). Yet, despite its importance in the economic sphere, financial capability has not been emphasized enough (Luo et al., 2021). Fortunately, it has begun to gain more attention recently (Parvathy & Kumar, 2022). Interestingly, amid this encounter, motivation serves as an interconnector between knowledge and aptitude in the context of finance. This argument can be supported by an earlier finding suggesting motivation to be a pivotal driving force in economic activity (Alkire & Deneulin, 2002), simultaneously highlighting its attempt to bridge these elements. In addition, alongside financial knowledge, attitude, and behavior, Parvathy & Kumar (2022) have included skills as another factor in characterizing financial capability and connecting a positive relationship with decision-making. Throughout the time of investigating this topic, several issues were found. First, Indonesia lacks the knowledge and ability in financial management. Most prior studies about financial literacy and financial capability were conducted in developed countries (Alessie et al., 2011; Atkinson et al., 2007; Lusardi, 2008; Taylor et al., 2011). Meanwhile, existing studies in Indonesia barely cover a wider problem, that is, the low financial capability compared to neighboring countries such as Malaysia, the Philippines, Thailand, and Vietnam (Lubis, 2021).

Second, the traditional concept of financial literacy needs to be revisited to include digital literacy in this era (A. Lyons et al., 2019), seeing not everyone can take advantage of the full potential of incoming opportunities and benefits (Luo et al., 2021). Similar to the relationship between financial literacy and financial capability, digital financial literacy (DFL) alone would be insufficient if people lack the essential skills for practicing and accustoming themselves to digital finance (Luo et al., 2021), hence the need for users to accustom themselves to DFS (Aziz & Naima, 2021). Consequently, Azeez & Akhtar (2021) found that DFL benefits in promoting motivation by building confidence in financial management and decision-making. This paper has accordingly incorporated digital financial attitude (DFA) and financial self-efficacy (FSE) into the motivational aspect. Third, as Indonesia's financial inclusion index continues to soar, mobile phones are getting increasingly more relevant to ensure accessibility (M. Kim et al., 2018). However, the ease of access nature of mobile apps could be detrimental for users with poor skills, notably by triggering impulsive behavior when they are pressured, resulting in unsatisfactory outcomes (Panos & Wilson, 2020). Therefore, this study also seeks the necessity of

digital skills (DS) while aligning financial capabilities with evolving technology. Above all, this paper investigates the digital financial capability (DFC) of Gen Z in Surabaya, the most populated city in East Java, Indonesia. Zimmerman (2011) categorizes Gen Z as digital natives, a term for people born after 1980, an era of internet, information, and technological advancement. As the second generation of digital natives, succeeding millennials, and as they make up the largest share of the population in the country by 27.94% (Badan Pusat Statistik, 2021), Gen Z should be more proficient than their predecessors. Nevertheless, a question emerges: why does DFC mostly remain absent in Gen Z in Indonesia? The purpose of this research is to find whether DFL has a significant effect on DFC while mediated by motivation and DS. Given the limited research focused on DFC in Indonesia, this study is among the first to address this gap.

LITERATURE REVIEW

ICM And KAB Theory

This study uses the integrated change model (ICM) and the knowledge, attitude, and behavior (KAB) theory. ICM is a behavioral change model deriving from the attitude, social influence, and self-efficacy (ASE) model that integrates the theory of planned behavior, social cognitive theory, transtheoretical model, health belief model, and goal-setting model (Vries et al., 2005). ICM progresses through three phases: pre-motivational or awareness, motivational, and post-motivational or action (Kasten et al., 2019). On the other hand, the knowledge, attitude, and behavior (KAB) approach assumes the idea that knowledge affects attitude, which in turn influences behavior (Schrader & Lawless, 2004). This theory is identical to Amagir et al.'s (2020) research about financial knowledge, financial attitude, financial self-efficacy, and financial behavior.

Digital Financial Literacy As Knowledge

The idea of DFL originates from the combination of financial literacy and digital literacy (Yadav & Banerji, 2023). DFL is necessary for promoting successful and effective financial outcomes in the digital domain (Abdallah et al., 2024; A. C. Lyons & Kass-Hanna, 2021; Prasad et al., 2018). The emergence of DFL is also supported by the fact that the Internet of Things (IoT) has been influencing financial activities recently (Hasan et al., 2023). While no formal definition of DFL has been widely accepted, Azeez & Akhtar (2021) and Kumar et al. (2023) correlate DFL with the knowledge utilization, awareness, and competence of an individual in managing digital financial products and digital financial risks. Financial management behavior is considered as one of the important concepts in the discipline of finance. According to financial behavior is related to a person's financial responsibility related to using his financial management methods. Financial responsibility is how the process of managing finances and assets is carried out productively. Financial behavior studies how social, cognitive and emotional factors influence individual economic decisions.

As college students ought to engage in consumptive behavior and excessive spending, Respati et al. (2023) suggest that individuals must have solid financial literacy in order to influence their financial behavior in a favorable manner. Supporting this claim, a study by Carpena et al. (2011) found that financial literacy strongly influences awareness of financial choices and financial attitudes. Another study by Fessler et al. (2020) found a 13% positive effect on financial attitude as the mediator between financial knowledge and behavior. Apart from that, increased financial literacy also positively leads to greater FSE (Brüggen et al., 2017, as cited in Lone & Bhat, 2024).

Digital Financial Attitude And Financial Self-Efficacy As Motivational Factors

Financial attitude is an individual's opinion to agree or disagree with financial advice to some degree (Parrotta & Johnson, 1998). Moko et al. (2022) explain that a better financial

attitude ultimately leads to better behavior in financial management. Mutually, digital attitude, a person's belief to negatively or positively evaluate digital technology, implicitly directs action (Getenet et al., 2024). A survey revealed that technology motivates students to learn as it makes learning more interesting and independent (Ng, 2012). In line with this finding, Prior et al. (2016) underscore the importance of having a positive attitude toward digital technology. In conclusion, DFA can be referred to as one's mindset and emotion toward the use of digital financial services. On the other hand, self-efficacy is related to a person's perceived capability to control and influence their own parts of life (Nadeem et al., 2020). Consecutively, FSE is an individual's confidence to manage their own finances effectively, reflecting their ability to sustain their desired lifestyle (Brüggen et al., 2017; Moreau et al., 2015). Individuals with strong FSE are more likely to use effective digital tools to improve their financial management. According to Lone and Bath (2024), being self-aware of their financial matters helps develop relevant skills and, in turn, boosts their confidence. Based on this study, the following hypotheses are proposed:

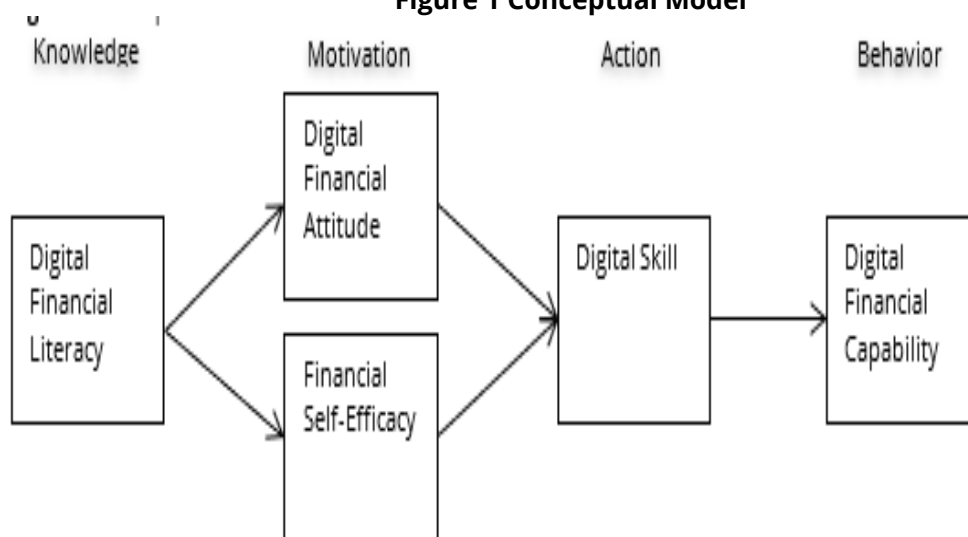
Digital Skill

Bouwman et al. (2024) define DS as the capacity to carry out a task in a digital setting. DS is so crucial in this era that it has now become a part of SDG 4, specifically 4.4.1 (Montoya, 2018; World Bank Group, 2016). In line with this report, Zusrony et al. (2024) found an urgency to hone DS in a digital work environment. On the contrary, having the motivation to do so is challenging, especially with the right attitude (Trenerry et al., 2021). Fortunately, Caporarello et al. (2020) found that Gen Z is highly capable in this skill set. Simultaneously, students who are proficient in digital finance handle their money more carefully (Respati et al., 2023). Based on this study, the following hypotheses are proposed:

Digital Financial Capability

Financial capability is the capacity to manage financial resources to attain financial competency (Xiao et al., 2014), making an assumption that customers are financially literate to a degree (K. T. Kim et al., 2024). To have the appropriate capability, people need to understand beyond financial literacy and have access to financial products that allow them to make their financial decisions (Sherraden, 2013). This study focuses on DFC to adapt to the digitization of financial services. According to Wang (2024), the aspect of DFC is the ability to distribute digital finance resources.

Figure 1 Conceptual Model



Source: Author Own (2024)

METHODS

Procedure

This study employed an exploratory quantitative approach to collect and analyze this research. A Hosmer–Lemeshow test with the unknown population formula was utilized to determine the minimum sample size needed to study Gen Z in Surabaya. The simple random sampling technique was used to choose the respondents. This survey was conducted online between July and September 2024 via Google Form, receiving 113 total responses, 98 of which were valid.

The purpose of this study, assurance of anonymity, and criteria were explained to the participants. Those criteria were people residing in Surabaya, born between 1997 and 2012, and have experience using digital finance.

Measurement And Scale

In this study, DFL was measured with eight items (DFL1-8), taken from Lyons & Kass-Hanna (2021). For the motivational factors, DFA was measured with four items (DFA1-4), taken from Ng (2012), while FSE was measured with four items (FSE1-4), adapted from Chen et al. (2001). Finally, DS was measured with four items (DS1-4), derived from DigComp (2018), and DFC was measured with four items (DFC1-4), derived from Luo et al. (2021). On the survey, respondents were asked to rate their level of agreeance on each question with a Likert scale comprised of 1 (strongly disagree) to 6 (strongly agree). The collected data were then analyzed with PLS-SEM using SmartPLS 4 software.

Data Analysis

Table 1 shows the survey results of Gen Z who use digital finance in Surabaya city. From this data, most of the responses were from people born in 2001-2004 (43.88%). Based on the gender, most of the respondents were female (64.29%). Finally, most of the respondents either had experienced (5.1%) or still experiencing (94.9%) digital finance.

Table 1 Respondent Characteristics (98 Valid)

Characteristics		Frequency	Percentage
Year of birth	1997-2000	18	18.37
	2001-2004	43	43.88
	2005-2008	36	36.73
	2009-2012	1	1.02
Gender	Male	35	35.71
	Female	63	64.29
Digital finance experience	Had experienced	5	5.10
	Still experiencing	93	94.90

Source: Author Own (2024)

During the process, DFC3-4 were removed as their factor loadings were below 0.6. Additionally, during the discriminant validity test, DFL4 failed the Fornell-Larcker criteria and was removed because it had the strongest correlation to DS1-4. After running the test again, the result was overall valid as every indicator above 0.6.

Table 2 Factor Loading

Indicator	Loading	Indicator	Loading	Indicator	Loading
DFL1	0.635	DFA1	0.807	FSE4	0.889
DFL2	0.664	DFA2	0.867	DS1	0.782
DFL3	0.762	DFA3	0.869	DS2	0.870
DFL5	0.752	DFA4	0.779	DS3	0.830
DFL6	0.777	FSE1	0.811	DS4	0.96
DFL7	0.783	FSE2	0.901	DFC1	0.949
DFL8	0.666	FSE3	0.906	DFC2	0.945

Source: Author Own (2024)

Table 3 illustrates how the AVE value of all items is above 0.5, which shows that the variables passed the convergent validity. On the next test, construct reliability, all variables are over 0.6 on Cronbach's alpha and over 0.7 on composite reliability. This proves that all variables passed the construct reliability test.

Table 3 Construct Reliability And Convergent Validity (AVE)

	AVE	Cronbach's Alpha	Composite Reliability
DFA	0.691	0.852	0.899
DFC	0.939	0.935	0.968
DFL	0.521	0.847	0.883
DS	0.694	0.853	0.901
FSE	0.77	0.9	0.93

Source: Author Own (2024)

A discriminant validity test is also assessed in this study. Table 4 shows that all items have higher AVE than each of their correlations with other constructs. For instance, DFA loaded 0.831 on DFA, but only 0.639 on DFC, 0.72 on DFL, 0.706 on DS, and 0.613 on FSE. This indicates that the data passed the Fornell-Larcker criterion test. Moreover, table 5 indicates that all items have significant cross-loadings (>0.3) on multiple factors. In one example, DFA1 loaded 0.807 on DFA, but only 0.41 on DFC, 0.498 on DFL, 0.529 on DS, and 0.361 on FSE. Lastly, table 6 suggests that all items have good HTMT validity (<0.85).

Table 4 Discriminant Validity (Fornell-Larcker)

	DFA	DFC	DFL	DS	FSE
DFA	0.831				
DFC	0.639	0.969			
DFL	0.72	0.624	0.722		
DS	0.706	0.639	0.706	0.833	
FSE	0.613	0.634	0.677	0.72	0.877

Source: Author Own (2024)

RESULTS

Table 5 reveals the R² value of all four impacted variables. DFA has an R² value of 0.518, which means 51.8% of its variance can be explained by DFL, suggesting an effective predicting model. Likewise, DS has an R² value of 0.631, indicating that 63.1% of its variance can be explained by DFA and FSE. On the other hand, the R² value of DFC is 0.408, hinting that only 40.8% of its variance can be explained by DS. FSE falls under a similar category with 0.459 R²

value, showing that only 45.9% can be explained by DFL. The rest of the percentage are explained by other variables outside the scope of this study.

In addition, table 5 also hints at the predictive relevance of all four impacting variables. The Q^2 value of these variables is above 0, which demonstrates that they are able to accurately predict the model.

Table 5 Structural Test (R^2) And Predictive Relevance (Q^2)

	R^2	Q^2 Predict
DFA	0.518	0.506
DFC	0.408	0.321
DS	0.631	0.477
FSE	0.459	0.439

Source: Author Own (2024)

The path coefficient, specific indirect effects, and total indirect effects employed a 2-tailed bootstrapping at a 5% significant level. Table 6 illustrates the direct effects of various variables and their significance. All paths show that their p-values are 0.000, which is well below 0.05, suggesting that all five paths are significant. Therefore, hypothesis 1 to hypothesis 5 are accepted.

Table 6 Path Coefficient

	P-Value
DFA → DS	0.000
DFL → DFA	0.000
DFL → FSE	0.000
DS → DFC	0.000
FSE → DS	0.000

Source: Author Own (2024)

Table 7 illustrates the indirect effects between various variables and their significance. All paths show their p-value below 0.05, which means that all mediator variables have mediation effects. For example, the second pathway's p-value is 0.001, which is below 0.05, indicating that DS has a mediation effect in the relation between FSE and DFC. The sixth pathway is 0.005, which is also below the significance threshold, indicating that FSE and DS have mediation effects in the relation between DFL and DFC. Meanwhile, the rest of the pathways are 0, below the threshold.

Table 7 Specific Indirect Effects

	P-Value
DFL → FSE → DS	0
FSE → DS → DFC	0.001
DFL → DFA → DS → DFC	0
DFL → DFA → DS	0
DFA → DS → DFC	0
DFL → FSE → DS → DFC	0.005

Source: Author Own (2024)

Table 8 illustrates the total indirect effects between various variables and their significance. The P-values on pathway are 0 on pathway 1 to 3, and 0.001 on pathway 4, both of

which are less than 0.05. This means that the indirect effects of DFA on DFC, DFL on DFC, DFL on DS, and FSE on DFC are statistically significant.

Table 8 Total Indirect Effect

	P-Value
DFA -> DFC	0
DFL -> DFC	0
DFL -> DS	0
FSE -> DFC	0.001

Source: Author Own (2024)

DISCUSSION

The findings in this study present valuable insights into the role of Digital Financial Literacy (DFL) in intensifying the Digital Financial Capability (DFC) of Gen Z, mediated by motivation—Digital Financial Attitude (DFA) and Financial Self-Efficacy (FSE)—and Digital Skill (DS). The result reveals that all five hypotheses were significant and all five hypotheses have a partial mediation effect on DFC. The significance of hypotheses 1 and 2 indicate DFL has a significant and direct correlation with DFA and FSE, respectively. Hypothesis 3 and 4 suggest that DFA and FSE have a significant and direct correlation with DS, respectively. Hypothesis 5 shows that DS has a significant and direct correlation with DFC.

In addition, DFA, FSE, and DS have mediation effects between DFL and DFC, suggesting partial mediation. In addition, these findings align with the KAB theory on the impact of financial knowledge on positive attitudes, which fosters financial behavior. In addition, the I-Change model is also integral in this research, confirming the three stages: perception in financial literacy, motivation, and action in digital finance. Furthermore, these results are similar to Uthaleang and Kiattisin's (2023) finding that revealed the importance of DFL on DFC for small entrepreneurs.

CONCLUSION

This study is among the first to include digital financial capability (DFC) and concludes the significance of digital financial literacy (DFL) on DFC. It can be determined that DFL is crucial in shaping the DFC of Gen Z, especially in this digital era, where everything is digitalized for faster and more convenient financial management. By being financially literate, one can enhance their financial attitude and self-efficacy, which encourages them to hone their digital skill, ultimately leading to capable behavior in making financial decisions. This study highlights the need for Gen Z to enhance their financial knowledge in digital platforms, which can be achieved by getting proper financial education from parents, education institutes, and financial courses. With sufficient knowledge, they can be more confident and have a positive attitude when dealing with financial calls. Moreover, the current industrial workflow forces financial institutions to adopt the internet, computers, and phones as the new platforms, which forces users to learn such skills. Finally, having adequate skills will enhance one's financial capability in digital form.

SUGGESTION

Based on the test results, some suggestions can be implemented by future researchers to extend this study.

1. Consider adding more variables that might impact digital financial capability (DFC) and their interaction with digital financial literacy (DFL).
2. Conduct long-term studies to track the changes between the current and future technology.

3. Develop educational programs that can help improve DFC.
4. Compare the studies between different countries.
5. Examine the emerging technology such as artificial intelligence and blockchain.

REFERENCES

- Abdallah, W., Tfaily, F., & Harraf, A. (2024). The impact of digital financial literacy on financial behavior: Customers' perspective. *Competitiveness Review: An International Business Journal*. <https://doi.org/10.1108/CR-11-2023-0297>
- Alessie, R., Van Rooij, M., & Lusardi, A. (2011). Financial literacy and retirement preparation in the Netherlands. *Journal of Pension Economics and Finance*, 10(4), 527–545. <https://doi.org/10.1017/S1474747211000461>
- Alkire, S., & Deneulin, S. V. (2002). Individual Motivation, Its Nature, Determinants, And Consequences For Within-Group Behavior. In J. Heyer, F. Stewart, & R. Thorp (Eds.), *Group Behavior and Development* (pp. 51–74). Oxford University Press Oxford. <https://doi.org/10.1093/oso/9780199256914.003.0003>
- Amagir, A., Groot, W., Van Den Brink, H. M., & Wilschut, A. (2020). Financial literacy of high school students in the Netherlands: Knowledge, attitudes, self-efficacy, and behavior. *International Review of Economics Education*, 34, 100185. <https://doi.org/10.1016/j.iree.2020.100185>
- Atkinson, A., McKay, S., Collard, S., & Kempson, E. (2007). Levels of Financial Capability in the UK. *Public Money and Management*, 27(1), 29–36. <https://doi.org/10.1111/j.1467-9302.2007.00552.x>
- Astuti H, M. Dkk. (2022). Pengaruh Pengetahuan Keuangan, Sikap Keuangan dan Kepribadian Terhadap Perilaku Manajemen Keuangan (Studi Kasus pada Pelaku UMKM Batik di Lampung). *Ekombis Review: Jurnal Ekonomi dan Bisnis*. <https://doi.org/10.37676/ekombis.v10i2.2262>
- Armereo, C. (2021). Analisis Good Corporate Governance Pada Pengelolaan Keuangan di Kantor Dinas Kearsipan dan Perpustakaan Kota Palembang. *Ekombis review: Jurnal Ekonomi dan Bisnis*. <https://doi.org/10.37676/ekombis.v9i2.1355>
- Azeez, N. P. A., & Akhtar, S. M. J. (2021). Digital Financial Literacy and Its Determinants: An Empirical Evidence from Rural India. *South Asian Journal of Social Studies and Economics*, 8–22. <https://doi.org/10.9734/sajsse/2021/v11i230279>
- Aziz, A., & Naima, U. (2021). Rethinking digital financial inclusion: Evidence from Bangladesh. *Technology in Society*, 64, 101509. <https://doi.org/10.1016/j.techsoc.2020.101509>
- Central Bureau of Statistics. (2021). RESULTS OF THE 2020 POPULATION CENSUS. <https://www.bps.go.id/id/pressrelease/2021/01/21/1854/hasil-sensus-penduduk-2020.html>
- Bank Indonesia. (2021, June 17). BI 7-DAY REVERSE REPO RATE STILL AT 3.50%: SYNERGY STRENGTHENS RECOVERY, MAINTAINING STABILITY. https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2314421.aspx
- Boku. (2021). 2021 Mobile Wallets Report—Boku. <https://www.boku.com/boku-knows/2021-mobile-wallets-report>
- Bouwman, M., Lub, X., Orlowski, M., & Nguyen, T.-V. (2024). Developing the digital transformation skills framework: A systematic literature review approach. *PLOS ONE*, 19(7), e0304127. <https://doi.org/10.1371/journal.pone.0304127>
- Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research*, 79, 228–237. <https://doi.org/10.1016/j.jbusres.2017.03.013>
- Caporarello, L., Manzoni, B., Cirulli, F., & Federico, M. (2020). Fostering Generation Z digital skills' development: Implications for Universities and HR. *ITAIS*, 12.

- Carpena, F., Cole, S. A., Shapiro, J., & Zia, B. (2011). Unpacking the Causal Chain of Financial Literacy. World Bank Policy Research Working Paper. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/329301468322465624/unpacking-the-causal-chain-of-financial-literacy>
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a New General Self-Efficacy Scale. *Organizational Research Methods*, 4(1), 62–83. <https://doi.org/10.1177/109442810141004>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2022). The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. The World Bank. <https://doi.org/10.1596/978-1-4648-1897-4>
- European Commission. Joint Research Centre. (2022). DigComp 2.2, The Digital Competence framework for citizens: With new examples of knowledge, skills and attitudes. Publications Office. <https://data.europa.eu/doi/10.2760/115376>
- Fessler, P., Silgoner, M., & Weber, R. (2020). Financial knowledge, attitude and behavior: Evidence from the Austrian Survey of Financial Literacy. *Empirica*, 47(4), 929–947. <https://doi.org/10.1007/s10663-019-09465-2>
- Getenet, S., Cante, R., Redmond, P., & Albion, P. (2024). Students' digital technology attitude, literacy and self-efficacy and their effect on online learning engagement. *International Journal of Educational Technology in Higher Education*, 21(1), 3. <https://doi.org/10.1186/s41239-023-00437-y>
- Hasan, R., Ashfaq, M., Parveen, T., & Gunardi, A. (2023). Financial inclusion – does digital financial literacy matter for women entrepreneurs? *International Journal of Social Economics*, 50(8), 1085–1104. <https://doi.org/10.1108/IJSE-04-2022-0277>
- Ignatyuk, A., Liubkina, O., Murovana, T., & Magomedova, A. (2020). FinTech as an innovation challenge: From big data to sustainable development. *E3S Web of Conferences*, 166, 13027. <https://doi.org/10.1051/e3sconf/202016613027>
- Johnson, E., & Sherraden, M. S. (2007). From Financial Literacy to Financial Capability Among Youth. *The Journal of Sociology & Social Welfare*, 34(3). <https://doi.org/10.15453/0191-5096.3276>
- Kasten, S., Van Osch, L., Candel, M., & De Vries, H. (2019). The influence of pre-motivational factors on behavior via motivational factors: A test of the I-Change model. *BMC Psychology*, 7(1), 7. <https://doi.org/10.1186/s40359-019-0283-2>
- Kim, K. T., Xiao, J. J., & Porto, N. (2024). Financial inclusion, financial capability and financial fragility during the COVID-19 pandemic. *International Journal of Bank Marketing*, 42(3), 414–436. <https://doi.org/10.1108/IJBM-07-2023-0373>
- Kim, M., Zoo, H., Lee, H., & Kang, J. (2018). Mobile financial services, financial inclusion, and development: A systematic review of academic literature. *THE ELECTRONIC JOURNAL OF INFORMATION SYSTEMS IN DEVELOPING COUNTRIES*, 84(5), e12044. <https://doi.org/10.1002/isd2.12044>
- Kumar, P., Pillai, R., Kumar, N., & Tabash, M. I. (2023). The interplay of skills, digital financial literacy, capability, and autonomy in financial decision making and well-being. *Borsa Istanbul Review*, 23(1), 169–183. <https://doi.org/10.1016/j.bir.2022.09.012>
- Gift. (2024). OJK: Gen Z and Millennials Are Vulnerable to Loan Traps. <https://feb.ugm.ac.id/en/news/4611-ojk-gen-z-and-millennials-are-vulnerable-to-loan-traps>
- Lesmana, D. C., Martal, D. V., Nabila, U., Fauzia, S., Raymond, R., Hasan, Z. K., & Aprizky, M. R. (2024). Stock Hedging Using Strangle Strategy on Vanilla Options and Capped Options. *Journal of Accounting and Finance*, 26(1), 47–55. <https://doi.org/10.9744/jak.26.1.47-55>
- Lone, U. M., & Bhat, S. A. (2024). Impact of financial literacy on financial well-being: A mediational role of financial self-efficacy. *Journal of Financial Services Marketing*, 29(1), 122–137. <https://doi.org/10.1057/s41264-022-00183-8>

- Lubis, A. W. (2021). Conceptualizing financial capability: Evidence from Indonesia. *International Journal of Ethics and Systems*, 37(2), 301–317. <https://doi.org/10.1108/IJOES-06-2020-0095>
- Luo, Y., Peng, Y., & Zeng, L. (2021). Digital financial capability and entrepreneurial performance. *International Review of Economics & Finance*, 76, 55–74. <https://doi.org/10.1016/j.iref.2021.05.010>
- Lusardi, A. (2008). Household Saving Behavior: The Role of Financial Literacy, Information, and Financial Education Programs (w13824; p. w13824). National Bureau of Economic Research. <https://doi.org/10.3386/w13824>
- Lyons, A. C., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring “digital” financial literacy. *FINANCIAL PLANNING REVIEW*, 4(2), e1113. <https://doi.org/10.1002/cfp2.1113>
- Lyons, A., Kass-Hanna, J., Liu, F., Greenlee, A., & Zeng, L. (2019). Building Financial Resilience Through Financial and Digital Literacy in South Asia and Sub-Saharan Africa. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3496562>
- Moko, W., Sudiro, A., & Kurniasari, I. (2022). The effect of financial knowledge, financial attitude, and personality on financial management behavior. *International Journal of Research in Business and Social Science* (2147- 4478), 11(9), 184–192. <https://doi.org/10.20525/ijrbs.v11i9.2210>
- Montoya, S. (2018, August 8). Meet the SDG 4 Data: Indicator 4.4.1 on Skills for a Digital World. <https://uis.unesco.org/en/blog/meet-sdg-4-data-indicator-4-4-1-skills-digital-world>
- Moreau, M., Gagnon, M.-P., & Boudreau, F. (2015). Development of a Fully Automated, Web-Based, Tailored Intervention Promoting Regular Physical Activity Among Insufficiently Active Adults With Type 2 Diabetes: Integrating the I-Change Model, Self-Determination Theory, and Motivational Interviewing Components. *JMIR Research Protocols*, 4(1), e25. <https://doi.org/10.2196/resprot.4099>
- Nadeem, M. A., Qamar, M. A. J., Nazir, M. S., Ahmad, I., Timoshin, A., & Shehzad, K. (2020). How Investors Attitudes Shape Stock Market Participation in the Presence of Financial Self-Efficacy. *Frontiers in Psychology*, 11, 553351. <https://doi.org/10.3389/fpsyg.2020.553351>
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>
- Nurhayani, U., Dongoran, F. R., Syah, D. H., & Sagala, G. H. (2024). Fintech Acceptance Among MSMEs: A Post-Covid 19 Response. *Journal of Accounting and Finance*, 26(1), 56–66. <https://doi.org/10.9744/jak.26.1.56-66>
- Financial Services Authority. (2019). Fintech Lending Statistics for the Period of May 2019 [dataset]. <https://ojk.go.id/id/kanal/iknb/data-dan-statistik/fintech/Pages/Statistik-Fintech-Lending-Periode-Mei-2019.aspx>
- Financial Services Authority. (2022). PRESS RELEASE - 2022 National Financial Literacy and Inclusion Survey [PRESS RELEASE]. <https://www.ojk.go.id/iru/policy/detailpolicy/9625/press-release-2022-national-financial-literacy-and-inclusion-survey>
- Financial Services Authority. (2024). P2P Lending Statistics for the Period of May 2024 [dataset]. <https://ojk.go.id/id/kanal/iknb/data-dan-statistik/fintech/Pages/Statistik-P2P-Lending-Periode-Mei-2024.aspx>
- Panos, G. A., & Wilson, J. O. S. (2020). Financial literacy and responsible finance in the FinTech era: Capabilities and challenges. *The European Journal of Finance*, 26(4–5), 297–301. <https://doi.org/10.1080/1351847X.2020.1717569>
- Parrotta, J. L., & Johnson, P. J. (1998). The Impact Of Financial Attitudes And Knowledge On Financial Management And Satisfaction Of Recently Married Individuals. *JFCP Research Journal*, 9(2), 59–74.

- Parvathy, V. K., & Kumar, J. (2022). Financial capability and financial wellbeing of women in community-based organizations: Mediating role of decision-making ability. *Managerial Finance*, 48(9/10), 1513–1529. <https://doi.org/10.1108/MF-05-2021-0234>
- Prasad, H., Meghwal, D., & Dayama, V. (2018). Digital Financial Literacy: A Study of Households of Udaipur. *Journal of Business and Management*, 5, 23–32. <https://doi.org/10.3126/jbm.v5i0.27385>
- Prior, D. D., Mazanov, J., Meacheam, D., Heaslip, G., & Hanson, J. (2016). Attitude, digital literacy and self-efficacy: Flow-on effects for online learning behavior. *The Internet and Higher Education*, 29, 91–97. <https://doi.org/10.1016/j.iheduc.2016.01.001>
- Respati, D. K., Widyastuti, U., Nuryati, T., Musyaffi, A. M., Handayani, B. D., & Ali, N. R. (2023). How do students' digital financial literacy and financial confidence influence their financial behavior and financial well-being? *Nurture*, 17(2), 40–50. <https://doi.org/10.55951/nurture.v17i2.154>
- Schrader, P. G., & Lawless, K. A. (2004). The knowledge, attitudes, & behaviors approach how to evaluate performance and learning in complex environments. *Performance Improvement*, 43(9), 8–15. <https://doi.org/10.1002/pfi.4140430905>
- Sherraden, M. (2013). Building Blocks of Financial Capability. In J. Birkenmaier, J. Curley, & M. Sherraden (Eds.), *Financial Capability and Asset Development* (pp. 3–43). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199755950.003.0012>
- Tahir, M. S., Ahmed, A. D., & Richards, D. W. (2021). Financial literacy and financial well-being of Australian consumers: A moderated mediation model of impulsivity and financial capability. *International Journal of Bank Marketing*, 39(7), 1377–1394. <https://doi.org/10.1108/IJBM-09-2020-0490>
- Taylor, M. P., Jenkins, S. P., & Sacker, A. (2011). Financial capability and psychological health. *Journal of Economic Psychology*, 32(5), 710–723. <https://doi.org/10.1016/j.joep.2011.05.006>
- Trenerry, B., Chng, S., Wang, Y., Suhaila, Z. S., Lim, S. S., Lu, H. Y., & Oh, P. H. (2021). Preparing Workplaces for Digital Transformation: An Integrative Review and Framework of Multi-Level Factors. *Frontiers in Psychology*, 12, 620766. <https://doi.org/10.3389/fpsyg.2021.620766>
- World Bank Group. (2016). *World Development Report 2016: Digital Dividends*. Washington, DC: World Bank. <https://doi.org/10.1596/978-1-4648-0671-1>
- Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer Financial Capability and Financial Satisfaction. *Social Indicators Research*, 118(1), 415–432. <https://doi.org/10.1007/s11205-013-0414-8>
- Yadav, M., & Banerji, P. (2023). A bibliometric analysis of digital financial literacy. *American Journal of Business*, 38(3), 91–111. <https://doi.org/10.1108/AJB-11-2022-0186>
- Zimmerman, M. (2012). Digital natives, searching behavior and the library. *New Library World*, 113(3/4), 174–201. <https://doi.org/10.1108/03074801211218552>
- Zusrony, E., Anzie, L. P., Manalu, G., Permana, I., Asti, P., & Imaliya, T. (2024). Utilizing Financial Technology, Financial Literacy, and Financial Self-Efficacy in Achieving Generation Zoomer's Financial Inclusion. *Target: Journal of Business Management*, 6(1), 1–10. <https://doi.org/10.30812/target.v6i1.4073>