# The Role of Fear of Missing Out in Mediating the Effect of Digital Financial Literacy on Online Gambling Decisions

Ade Rahmawati, Nindi Vaulia Puspita*, Priyo Priyantoro

Wahyu Dede Gustiawan

*Economic Faculty, Kadiri University, Kediri, Indonesia*
*Corresponding author. Email: nindi.vaulia@unik-kediri.ac.id*

**ABSTRACT**
This study examines the mediating role of Fear of Missing Out (FOMO) in the relationship between Digital Financial Literacy (DFL) and Online Gambling Decisions (OGD) among productive-age communities in East Java, Indonesia. A quantitative explanatory approach was employed using purposive sampling with 96 respondents. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that Digital Financial Literacy does not significantly influence Online Gambling Decisions directly. However, Digital Financial Literacy significantly affects Fear of Missing Out, which in turn significantly influences Online Gambling Decisions. Furthermore, Fear of Missing Out fully mediates the relationship between Digital Financial Literacy and Online Gambling Decisions. These findings suggest that online gambling decisions are influenced more strongly by emotional and psychological factors than by rational financial considerations. The study supports Dual Process Theory by demonstrating that emotional and impulsive processes may dominate cognitive abilities in financial decision-making within digital environments.

***Keywords:*** *Digital Financial Literacy, Fear of Missing Out, Online Gambling Decision, Dual Process Theory, Financial Behavior.*

## 1. INTRODUCTION

The rapid development of digital technology has increased access to digital financial services and improved financial inclusion worldwide (OECD, 2020; World Bank, 2023). However, the digital era has also facilitated risky financial behaviors, including online gambling, which has become a serious social issue in Indonesia due to its accessibility and integration with digital payment systems (Ghelfi et al., 2024; Hardini et al., 2025). Online gambling transactions in Indonesia have reached hundreds of trillions of rupiah, while East Java is among the provinces with the highest gambling-related social problems (Databoks Katadata, 2024). This phenomenon suggests that financial decisions are not always rational and may be influenced by psychological factors.

One important psychological factor is Fear of Missing Out (FOMO), defined as the fear of missing rewarding experiences enjoyed by others (Przybylski et al., 2013). In digital environments, exposure to social media, gambling advertisements, and financial success stories encourages social comparison, creating anxiety about missing opportunities and leading to impulsive online gambling decisions (Gerrans et al., 2023; Li et al., 2025). Meanwhile, Digital Financial Literacy (DFL) refers to the ability to understand and use digital financial services responsibly and is associated with rational and analytical thinking (System 2), whereas online gambling decisions are often driven by emotional and impulsive processes (System 1) according to Dual Process Theory (Armstrong, Rocklof, et al., 2020; Kahneman, 2011).

Previous studies have shown that financial literacy may influence behavior indirectly through mediating psychological or behavioral variables rather than through direct effects alone (Priyantoro, 2023; Puspita et al., 2023). Although prior research has examined online gambling, FOMO, and risky financial behavior separately, studies investigating the mediating role of FOMO in the relationship between Digital Financial Literacy and Online Gambling Decisions remain limited, particularly in Indonesia (Gerrans et al., 2023; Ghelfi et al., 2024). Therefore, this study examines the effect of Digital Financial Literacy on Online Gambling Decisions and the mediating role of Fear of Missing Out among productive-age communities in East Java.

The hypotheses proposed in this study are as follows:

H1: Digital Financial Literacy significantly affects Online Gambling Decisions.

H2: Digital Financial Literacy significantly affects Fear of Missing Out.

H3: Fear of Missing Out significantly affects Online Gambling Decisions.

H4: Fear of Missing Out mediates the effect of Digital Financial Literacy on Online Gambling Decisions.

## 2. RESEARCH METHODS

This study employed a quantitative approach with an explanatory research design. The explanatory design was selected because this study aims to explain the causal relationships among Digital Financial Literacy, Fear of Missing Out, and Online Gambling Decisions. The study was conducted in East Java Province, Indonesia. The population consisted of productive-age individuals aged 18–50 years who had used digital financial services, actively used social media, and had experience with online gambling activities. The sampling technique used was purposive sampling. Respondents were selected based on the following criteria:

- Aged between 18 and 50 years.
- Resided in East Java Province.
- Had experience using digital financial services.
- Had experience participating in online gambling activities.
- Actively used social media.

The minimum sample size was determined using the Lemeshow formula:

n = minimum sample size

Z = Z-score at a 95% confidence level (1.96)

P = estimated population proportion (0.5)

d = margin of error (0.10) The calculation is as follows:

Therefore, the minimum number of respondents required in this study was 96 individuals.

Data were collected using an online questionnaire measured with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire consisted of indicators measuring Digital Financial Literacy, Fear of Missing Out, and Online Gambling Decisions. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). The analysis included measurement model evaluation (outer model) and structural model evaluation (inner model).

The structural model can be expressed as follows:

$$FOMO = \beta_1 DFL + \varepsilon_1$$

and

$$OGD = \beta_2 DFL + \beta_3 FOMO + \varepsilon_2$$

DFL = Digital Financial Literacy

FOMO = Fear of Missing Out

OGD = Online Gambling Decision

β = Path coefficient

ε = Error term.

# 3. RESULTS AND DISCUSSIONS

## 3.1. Measurement Model Evaluation

The measurement model was evaluated using Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). Cronbach's Alpha and CR values above 0.70 indicate acceptable reliability, whereas AVE values above 0.50 indicate adequate convergent validity (Hair et al., 2018).

**Table 1.** Reliability and Convergent Validity

| Variable | Cronbach's Alpha | Composite Reliability | AVE |
|---|---|---|---|
| Digital Financial Literacy | 0.880 | 0.912 | 0.677 |
| Fear of Missing Out | 0.810 | 0.872 | 0.636 |
| Online Gambling Decision | 0.930 | 0.945 | 0.766 |

Table 1 shows that all constructs meet the reliability and validity criteria. Cronbach's Alpha values range from 0.810 to 0.930, while Composite Reliability values range from 0.872 to 0.945. Moreover, all AVE values exceed 0.50, indicating satisfactory convergent validity. Therefore, the constructs are considered reliable and valid for structural model analysis (Hair et al., 2018).

## 3.2. Structural Model Evaluation

The structural model was assessed by examining the path coefficients and significance values. The results are presented in Table 2.

**Table 2.** Direct Effect Results

| | Relationship | Path Coefficient (β) | p-value | Result |
|---|---|---|---|---|
| H1 | DFL → OGD | -0.143 | 0.161 | Rejected |
| H2 | DFL → FOMO | 0.304 | 0.001 | Supported |
| H3 | FOMO → OGD | 0.507 | 0.000 | Supported |
| H4 | DFL → FOMO → OGD | 0.154 | 0.005 | Supported |

Table 2 indicates that Digital Financial Literacy does not significantly affect Online Gambling Decision ($\beta$ = -0.143; $p = 0.161$). Thus, H1 is rejected. This finding suggests that financial knowledge alone is insufficient to prevent risky behavior in digital environments. According to Dual Process Theory, Digital Financial Literacy reflects rational and cognitive abilities (System 2), whereas online gambling decisions are often driven by emotional and impulsive processes (System 1) (Kahneman, 2011). This finding is consistent with Hamurcu et al. (2025), who argued that financial literacy does not always translate into responsible gambling behavior (Hamurcu et al., 2025). In contrast, Digital Financial Literacy significantly affects Fear of Missing Out ($\beta = 0.304$; $p = 0.001$), supporting H2. This result indicates that individuals who are more engaged in digital financial environments tend to experience stronger social comparison and fear of being left behind. Similar findings were reported by (Gerrans et al., 2023; Li et al., 2025).

Fear of Missing Out also significantly influences Online Gambling Decision ($\beta = 0.507$; $p < 0.001$), supporting H3. This finding suggests that individuals experiencing higher levels of FOMO are more likely to engage in online gambling activities. Exposure to social media and financial success stories may encourage social comparison, which subsequently increases anxiety about missing opportunities and leads to impulsive gambling behavior (Li et al., 2025; Przybylski et al., 2013).

## 3.3. Effect Size Analysis

Effect size ($f^2$) was assessed to determine the contribution of each exogenous variable to the endogenous variables.

**Table 3.** Effect Size ($f^2$)

| Relationship | $f^2$ | Effect Size |
|---|---|---|
| DFL → FOMO | 0.102 | Small |
| DFL → OGD | 0.024 | Small |

| | | |
|---|---|---|
| FOMO → OGD | 0.305 | Medium |

Table 3 shows that Digital Financial Literacy has a small effect on Fear of Missing Out ($f^2 = 0.102$) and Online Gambling Decision ($f^2 = 0.024$). In contrast, Fear of Missing Out exhibits a moderate effect on Online Gambling Decision ($f^2 = 0.305$). These findings indicate that psychological factors contribute more substantially to online gambling behavior than cognitive financial abilities alone (Hair et al., 2018).

### *3.4. Mediation Analysis*

The mediation effect of Fear of Missing Out was examined to determine whether FOMO mediates the relationship between Digital Financial Literacy and Online Gambling Decision.

**Table 4.** Mediation Type Analysis

| Relationship | Direct Effect | Indirect Effect | p-value | Mediation Type |
|---|---|---|---|---|
| DFL → FOMO → OGD | -0.143 | 0.154 | 0.005 | Full Mediation |

Table 4 demonstrates that the indirect effect of Digital Financial Literacy on Online Gambling Decision through Fear of Missing Out is significant ($\beta = 0.154$; $p = 0.005$), whereas the direct effect is not significant. Therefore, Fear of Missing Out fully mediates the relationship between Digital Financial Literacy and Online Gambling Decision (Hayes, 2018). This finding implies that Digital Financial Literacy does not directly influence online gambling behavior but operates through psychological mechanisms associated with FOMO. Individuals who are highly exposed to digital financial environments may develop anxiety about missing opportunities, which subsequently increases their tendency to engage in online gambling activities (Gerrans et al., 2023). Overall, the findings support Dual Process Theory by demonstrating that rational financial abilities do not always dominate financial behavior.

Emotional and impulsive tendencies associated with Fear of Missing Out may override rational considerations, particularly in digital environments characterized by intensive social comparison and persuasive marketing strategies (Kahneman, 2011; Shi & Li, 2023). Therefore, preventive interventions should integrate digital financial literacy, psychological literacy, self-control, and awareness of cognitive biases to reduce vulnerability to online gambling behavior (Armstrong, Rockloff, et al., 2020).

### *3.5. Discussion*

The findings indicate that Digital Financial Literacy does not significantly influence Online Gambling Decisions directly, suggesting that financial knowledge alone is insufficient to prevent risky behavior in digital environments. According to Dual Process Theory, Digital Financial Literacy reflects rational and cognitive abilities (System 2), whereas online gambling decisions are often driven by emotional and impulsive processes (System 1) (Kahneman, 2011). This finding is consistent with previous studies showing that emotional factors may override rational financial considerations in gambling behavior (Hamurcu et al., 2025; O'Connor & Ivory, 2025). In contrast, Digital Financial Literacy significantly affects Fear of Missing Out, and FOMO significantly influences Online Gambling Decisions, indicating that financial literacy may affect behavior indirectly through psychological mechanisms rather than direct effects alone (Ferilli et al., 2024; Gerrans et al., 2023).

Similar evidence was reported by Priyantoro (2023) and Puspita et al. (2025), who emphasized the importance of psychological and emotional factors in shaping financial behavior (Priyantoro, 2023; Puspita et al., 2023). Therefore, these findings reinforce Dual Process Theory by demonstrating that emotional-intuitive processes may dominate rational-analytical processes in online gambling decisions (Armstrong, Rocklof, et al., 2020; Kahneman, 2011).

## 4. CONCLUSION

This study concludes that Digital Financial Literacy does not directly influence Online Gambling Decisions but significantly affects Fear of Missing Out, which in turn influences Online Gambling Decisions. Fear of Missing Out fully mediates the relationship between Digital Financial Literacy and Online Gambling Decisions, indicating that online gambling behavior is driven more by emotional and psychological factors than by rational financial considerations. These findings support Dual Process Theory, suggesting that emotional and impulsive tendencies (System 1) may override cognitive abilities represented by Digital Financial Literacy (System 2) in digital environments (Armstrong, Rocklof, et al., 2020; Kahneman, 2011). Therefore, preventive interventions should integrate digital financial literacy, psychological literacy, self-control, awareness of manipulative digital promotions, and education on cognitive biases to reduce vulnerability to risky financial behavior (Shi & Li, 2023). Future studies are encouraged to examine additional psychological factors and involve larger samples to enhance the generalizability of the findings (Choi & Kim, 2021; Ghelfi et al., 2024).

## REFERENCES

Armstrong, T., Rocklof, M., & Browne, M. (2020). Gamble with Your Head and Not Your Heart : A Conceptual Model for How Thinking - Style Promotes Irrational Gambling Beliefs. Journal of Gambling Studies, 0123456789. https://doi.org/10.1007/s10899-019-09927-z

Armstrong, T., Rockloff, M., & Browne, M. (2020). Beliefs About Gambling Mediate the Effect of Cognitive Style on Gambling Problems. Journal of Gambling Studies, 0123456789. https://doi.org/10.1007/s10899-020-09942-5

Choi, J., & Kim, K. (2021). The Relationship between Impulsiveness , Self-Esteem , Irrational Gambling Belief and Problem Gambling Moderating Effects of Gender.

Databoks Katadata. (2024). Jawa Timur, Provinsi dengan Perceraian karena Judi Terbanyak pada 2024. Databoks.Katadata.Co.Id. https://databoks.katadata.co.id/demografi/statistik/682c3557717a1/jawa-timur-provinsi-dengan-perceraian-karena-judi-terbanyak-pada-2024

Ferilli, G. B., Palmieri, E., Miani, S., & Stefanelli, V. (2024). Research in International Business and Finance The impact of FinTech innovation on digital financial literacy in Europe : Insights from the banking industry. Research in International Business and Finance, 69 (January), 102218. https://doi.org/10.1016/j.ribaf.2024.102218

Gerrans, P., Abisekaraj, S. B., & Liu, Z. F. (2023). The fear of missing out on cryptocurrency and stock investments : Direct and indirect effects of financial literacy and risk tolerance. 103–137. https://doi.org/10.1017/flw.2023.6

Ghelfi, M., Scattola, P., Giudici, G., & Velasco, V. (2024). Online Gambling : A Systematic Review of Risk and Protective Factors in the Adult Population. Journal of Gambling Studies, 40 (2), 673–699. https://doi.org/10.1007/s10899-023-10258-3

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2018). When to use and how to report the results of PLS-SEM. April 2019. https://doi.org/10.1108/EBR-11-2018-0203

Hamurcu, Ç., Aktan, E., Hayriye, M., Hamurcu, D., Öz, T., & Yavuz, E. (2025). The Financial Literacy Paradox in Gambling Disorder : Why Knowing Isn ' t Doing. Society, 62 (5), 698–705. https://doi.org/10.1007/s12115-025-01123-7

Hardini, F. D., Aji, A. W., Azhar, F., & Amarta, A. (2025). Kriminalisasi Judi Online terhadap Masyarakat dan Sistem Peradilan Pidana. 2.

Hayes, A. F. (2018). Introduction to Mediation, Moderation, and Conditional Process Analysis.

Kahneman, D. (2011). Thinking, Fast and Slow. Farrar, Straus and Giroux.

Li, Y., Delfabbro, P., & King, D. (2025). Investigating the Role of Regret , FOMO and Financial Literacy in Cryptocurrency Speculation Factors Related to Risky Trading : Risk and Protective Factors. International Journal of Mental Health and Addiction, 0123456789. https://doi.org/10.1007/s11469-025-01555-6

O'Connor, F., & Ivory, N. (2025). Financial Literacy and Gambling Behaviour : A Systematic Review. Journal of Gambling Studies, 1383–1399.

OECD. (2020). OECD / INFE survey instrument to measure digital financial literacy Table of contents.

Priyantoro, P. (2023). Research in Business & Social Science The effect of financial literacy on business performance through mediation of financial access and financial risk attitude. 12 (9), 275–287.

Przybylski, A. K., Murayama, K., Dehaan, C. R., & Gladwell, V. (2013). Com puters in Human Behavior Motivational , emotional , and behavioral correlates of fear of missing out. Computers in Human Behavior, 29 (4), 1841–1848. https://doi.org/10.1016/j.chb.2013.02.014

Puspita, N. V., Mansor, A. A., & Yuliari, K. (2023). Emotional intelligence , sociodemographic , and investment decision : the moderating effect of financial literacy. 22 (2), 93–100. https://doi.org/10.24123/jmb.v22i2.630

Shi, W., & Li, N. (2023). The effects of cognitive bias and cognitive style on trait impulsivity in moderate-risk gambling : The moderating effect of self-control. January. https://doi.org/10.3389/fpsyg.2023.1089608

World Bank. (2023). The Global State of Financial Inclusion & Consumer Protection.