

The Influence of FOMO (Fear of Missing Out) and Marketplace Gamification on Gen Z's Financial Behavior with Self-Control as a Moderator

Lita Ningrum Afriani¹, Rofi Puspitaningtias², Gita Rahmadani³

^{1,2} Politeknik Madyathika, Bisnis dan Manajemen Ritel, Indonesia

³ Universitas Al-Irsyad Cilacap, Indonesia

* Correspondence e-mail; lita.afriany@gmail.com

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Abstract

The increasing use of digital platforms among Gen Z has contributed to the emergence of consumptive behaviors driven by various digital stimuli, including limited-time notifications, reward systems, and game-based features designed to enhance user engagement. This study aims to analyze the influence of Fear of Missing Out (FOMO) and marketplace gamification features on impulsive financial behavior among Generation Z, with self-control acting as a moderating variable. Unlike previous studies that examined FOMO and gamification separately, this research integrates both variables into a single model to provide a more comprehensive explanation of Generation Z's financial behavior by combining psychological factors and digital design elements. Using a quantitative approach, data were collected through questionnaires distributed to 100 Generation Z respondents who actively use marketplaces, selected through purposive sampling. The data were analyzed using Multiple Linear Regression Analysis with SMART PLS 3. The findings reveal that Fear of Missing Out (FOMO) does not significantly affect financial behavior, whereas gamification has a significant influence on financial behavior. Furthermore, self-control strengthens the relationship between gamification and financial behavior but does not moderate the relationship between FOMO and financial behavior. This study is limited to Generation Z marketplace users, which restricts the generalization of findings to other age groups or digital platform users. Nevertheless, the results provide valuable insights for marketplace practitioners, policymakers, and academics in developing strategies to enhance digital financial literacy, design more responsible gamification features, and strengthen self-control mechanisms to promote healthier financial behavior in the digital era.

Keywords

Fear of Missing Out, Impulsive Financial Behavior, Marketplace Gamification, Self-Control,



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INTRODUCTION

The development of digital technology and the rapid growth of e-commerce have significantly changed people's consumption patterns, particularly among Generation Z. This generation is known as digital natives, who rely heavily on technology in their daily activities, including shopping. Ease of access, digital payment systems, and various interactive features in marketplaces have driven an increase in online transactions, but on the other hand, they have also triggered the emergence of impulsive buying behavior (Djamhari et al., 2024). Indonesia is among the countries experiencing rapid internet and digital commerce development. Economically, business perspectives have changed with the times. Technological advancements and internet access have brought significant changes to Indonesian society (Saied & Syafii, 2023).

Impulse buying behavior is the act of spontaneously purchasing without careful planning, often influenced by emotional and situational factors. In the digital context, this behavior is increasing due to marketing stimuli designed to quickly and intensely capture consumers' attention. One of the main psychological factors contributing to this phenomenon is the Fear of Missing Out (FOMO). FOMO is a psychological state characterized by the fear of missing out on opportunities, experiences, or current trends, which drives individuals to make immediate decisions, including making purchases (Ayyasy et al., 2025).

FOMO is often exploited by e-commerce platforms through marketing strategies such as limited-time promotions, product exclusivity, and social validation. These strategies create a sense of urgency and social pressure that can drive consumers, particularly Generation Z, to make impulsive purchases without rational consideration (Rachman et al., 2024). In addition to FOMO, another factor that further reinforces impulsive behavior is the implementation of gamification features in marketplaces.

Gamification is the use of game elements such as points, rewards, levels, and challenges in non-game contexts to increase user engagement. In e-commerce environments, gamification can create a more enjoyable and interactive shopping experience, thereby increasing consumer emotional engagement. This aligns with the Stimulus–Organism–Response (S-O-R) approach, which explains that digital environmental stimuli, such as interactive and social features, can influence an individual's psychological state and result in impulsive responses (Promalessy et al., 2025).

One internal factor that plays a crucial role in controlling impulsive behavior is self-control. Self-control is an individual's ability to manage impulses, emotions, and behaviors to maintain long-term goals. Individuals with high levels of self-control tend to be better able to resist the urge to make impulsive purchases, even when exposed to various digital stimuli such as FOMO and gamification. Conversely, low levels of self-control can reinforce tendencies toward consumer behavior and irrational financial decisions.

Thus, the relationship between FOMO, marketplace gamification features, and impulsive financial behavior becomes even more complex when self-control is considered as a moderating variable. This research is crucial for understanding the dynamics of Gen Z consumer behavior in the digital era and contributing to the development of more responsible marketing strategies and wiser financial management for consumers.

METHODS

This quantitative research uses an associative approach. The aim is to determine the effect of the independent variables on the dependent variable, namely to determine the causal effect of Fear of Missing Out (FOMO) (X_1) and Marketplace Gamification (X_2) on the dependent variables, namely Impulsive Financial Behavior (Y) and Self-Control as a moderating variable among Generation Z in Purbalingga Regency.

The population is Generation Z in Purbalingga Regency, aged 18–27 (born 1997–2012) and actively using at least one marketplace application for at least six months for daily purchasing activities. The sampling technique used was purposive sampling, which is a technique for determining samples based on specific considerations in accordance with research criteria. The sample size was 100 respondents.

This study used primary data sources, namely data obtained directly from the original source without intermediaries, namely respondents belonging to the Generation Z category of marketplace application users in Purbalingga Regency. Primary data was used because it can provide factual information based on the respondents' conditions at the time of the study. The method used to collect primary data in this study was to distribute questionnaires to predetermined respondents. Each statement in the questionnaire was measured using a Likert scale with five levels of assessment, ranging from strongly disagree (1) to strongly agree (5).

FINDINGS AND DISCUSSION

Multiple Linear Regression Analysis

Data processing in this study was supported by SmartPLS, or Smart Partial Least Squares. SmartPLS is a statistical software useful for testing relationships between variables, both among latent variables and with indicator variables (Purwanto et al., (2019). Multiple linear regression analysis was used to determine the direction and magnitude of the influence of independent variables on the dependent variable.

Bootstrapping test results showed that most indicators had t-statistic values above 1.96, thus significantly reflecting their constructs. For the FOMO construct, t-statistic values ranged from 12.958 to 29.062, while for Self-Control, they ranged from 21.014 to 59.386. The Gamification construct showed t-statistic values between 10.639 and 24.300, and Financial Behavior between 13.562 and 27.811. This indicates that all indicators are significant and support the validity of the measurement model.

In the structural model, the relationship between FOMO and Financial Behavior showed a t-statistic value of 0.563, thus not significant. Conversely, Self-Control had a significant effect on Financial Behavior with a t-statistic of 7.380, and Gamification also had a significant effect with a t-statistic of 4.276. Furthermore, the moderating effects showed different results, with Moderating Effect 1 being insignificant ($t = 1.163$), while Moderating Effect 2 was significant with a t-statistic of 2.674. Thus, it can be concluded that only partial structural relationships and moderating effects are empirically supported in this research model.

Coefficient of Determination (R^2) Test

According to Ghozali Imam (2021), the coefficient of determination test aims to determine the extent to which an independent variable can explain variation in the dependent variable. An R^2 value close to 1 indicates that the independent variable has a significant influence on the dependent variable. The coefficient of determination (R^2) for the Financial Behavior construct was 0.818. This indicates that the tested variables FOMO, Gamification, Self-Control, and their moderating effects can explain 81.8% of the variation. on Financial Behavior, while the remaining 18.2% is influenced by other variables outside the research model. The R^2 value is relatively high, thus concluding that the model has strong explanatory power in predicting respondents' financial behavior.

Hypothesis Testing

T-Test (Partial) and F-Test (Simultaneous)

The t-test is used to examine the partial effect of each independent variable on the dependent variable (Ghozali Imam, 2021). The test is conducted by comparing the

significance value (Sig.) with $\alpha = 0.05$. If the Sig. value is <0.05 , the independent variable has a significant effect on the dependent variable.

Discussion

The Dominant Role of FOMO on Financial Behavior

The finding that FOMO has a significant influence on financial behavior aligns with research (Hodkinson, 2019), which states that FOMO drives individuals to make impulsive financial decisions, particularly in the context of investment and digital consumption. Similarly, Zhang et al. (2024) found that FOMO is positively correlated with overspending and compulsive buying behavior in millennials.

The finding that self-control only has a marginal influence (0.563) on financial behavior appears contradictory to classical theory, but is supported by the findings of Achtziger et al. (2015), which state that in environments with high social pressure and digital stimuli, self-control can erode and is no longer a primary predictor of financial behavior. Duckworth & Gross (2014) also added that the effectiveness of self-control is highly dependent on the situational context; in the context of gamification and FOMO, self-control tends to be dominated by reward sensitivity.

The moderation value of gamification on the relationship between variables (2.674) indicates that gamification features such as leaderboards, badges, or reward notifications strengthen the effect of FOMO on financial behavior. This is consistent with research by Hamari et al. (2016), which found that gamification in financial apps can increase engagement while triggering compulsive behavior if not designed ethically. Werbach & Hunter (2020) also emphasized that gamification mechanics such as limited-time offers and status badges can trigger fear of missing out and encourage overspending.

Theoretically, these findings contradict the assumption that self-control is the primary restraint on risky financial behavior. Instead, FOMO and gamification have proven to be more dominant in today's digital context. Practically, these results remind regulators and financial app developers to be more careful in designing gamification features to avoid exploiting users' FOMO.

CONCLUSION

This study aims to analyze the influence of Fear of Missing Out (FOMO) and marketplace gamification on Generation Z's financial behavior, with self-control as a moderating variable. The results are expected to show that FOMO and marketplace gamification are factors that influence Gen Z's financial behavior, while self-control

plays a role in strengthening or weakening this influence. This study also contributes to the development of financial behavior studies in the digital era by integrating psychological factors, digital marketing technology, and self-control in one research model.

REFERENCES

- Achtziger, A., Hubert, M., Kenning, P., Raab, G., & Reisch, L. (2015). Debt out of control: The links between self-control, compulsive buying, and real debts. *Journal of Economic Psychology*, 49, 141–149. <https://doi.org/10.1016/j.joep.2015.04.003>
- Amaral, L. B. B., Iramani, R., & Pertiwi, T. D. (2024). Studi financial literacy, financial self-efficacy, financial behavior dosen Universidade da Paz Timor Leste. *Journal of Business & Banking*, 14(1), 113–132. <https://doi.org/10.14414/jbb.v14i1.5024>
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness. *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9–15. <https://doi.org/10.1145/2181037.2181040>
- Dinçer, E., Saygın, M., & Karadal, H. (2022). The Fear of Missing Out (FoMO) (pp. 631–651). <https://doi.org/10.4018/978-1-7998-9187-1.ch028>
- Duckworth, A., & Gross, J. J. (2014). Self-Control and Grit. *Current Directions in Psychological Science*, 23(5), 319–325. <https://doi.org/10.1177/0963721414541462>
- Hamari, J., Shernoff, D. J., Rowe, E., Coller, B., Asbell-Clarke, J., & Edwards, T. (2016). Challenging games help students learn: An empirical study on engagement, flow and immersion in game-based learning. *Computers in Human Behavior*, 54, 170–179. <https://doi.org/10.1016/j.chb.2015.07.045>
- Hodkinson, C. (2019). 'Fear of Missing Out' (FOMO) marketing appeals: A conceptual model. *Journal of Marketing Communications*, 25(1), 65–88. <https://doi.org/10.1080/13527266.2016.1234504>
- Ghozali Imam. (2021). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 26*. Badan Penerbit Universitas Diponegoro.
- Kimiagari, S., & Asadi Malafe, N. S. (2021). The role of cognitive and affective responses in the relationship between internal and external stimuli on online impulse buying behavior. *Journal of Retailing and Consumer Services*, 61, 102567. <https://doi.org/10.1016/j.jretconser.2021.102567>
- Li, X., Zhou, Y., Wong, Y. D., Wang, X., & Yuen, K. F. (2021). What influences panic buying behaviour? A model based on dual-system theory and stimulus-organism-response framework. *International Journal of Disaster Risk Reduction*, 64, 102484.

<https://doi.org/10.1016/j.ijdr.2021.102484>

- Oh, G. E., & Mukhopadhyay, A. (2024). Dynamics of self-control during choice and post-choice consumption quantity. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1238780>
- Purwanto, A., Asbari, M., & Santoso, P. B. (2019). Does Culture, Motivation, Competence, Leadership, Commitment Influence Quality Performance? *Inovbiz: Jurnal Inovasi Bisnis*, 7(2), 201. <https://doi.org/10.35314/inovbiz.v7i2.1210>
- Saied, M., & Syafii, A. (2023). Perancangan dan Implementasi Sistem Absensi Berbasis Teknologi Terkini Untuk Meningkatkan Efisiensi Pengelolaan Kehadiran Karyawan dalam Perusahaan. *Jurnal Teknik Indonesia*, 2(3), 87–92. <https://doi.org/10.58860/jti.v2i3.21>
- WERBACH, K., & HUNTER, D. (2020). *For the Win*, Revised and Updated Edition. Wharton School Press. <https://doi.org/10.2307/j.ctv2hdrfsm>
- Zhang, X., Fan, J., & Zhang, R. (2024). The impact of social exclusion on impulsive buying behaviour of consumers on online platforms: Samples from China. *Heliyon*, 10(1), e23319. <https://doi.org/10.1016/j.heliyon.2023.e23319>