

# Impulsive buying in a social media environment: The role of Fear of Missing Out Among Generation Z

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**Abstract.** Social media has become an integral part of daily life for Generation Z and plays a growing role in shaping their consumption behavior. This study examines how social media use influences impulsive buying behavior, with fear of missing out (FoMO) positioned as a mediating psychological mechanism. Using an explanatory research design, data were collected from 237 Indonesian Generation Z respondents aged 18–26 years through an online survey. The data were analyzed using descriptive statistics and structural equation modeling (SEM-PLS). The findings show that social media use significantly increases FoMO, and FoMO, in turn, has a strong positive effect on impulsive buying behavior. In contrast, social media use does not have a direct effect on impulsive buying. These results suggest that impulsive buying among Generation Z is driven primarily by psychological pressure related to social comparison rather than by social media exposure alone. By clarifying the mediating role of FoMO, this study contributes to a more nuanced understanding of consumer behavior in social media environments, particularly among young consumers in emerging digital markets.

## 1 Introduction

Rapid technological development has made the internet an integral part of everyday life, as it facilitates a wide range of activities, from basic communication to more complex economic transactions. In Indonesia, internet penetration has continued to increase substantially. The number of internet users reached approximately 229.4 million people, representing 80.66% of the total population in 2025 [1]. This figure indicates that internet use has become a dominant feature of daily life for most Indonesians. The internet offers various benefits, including easier access to information, long-distance communication, entertainment, and greater efficiency in terms of time and cost. Consistent with these trends, national survey findings show that individuals primarily use the internet to access social media, public

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services, entertainment content, and conduct online transactions [1]. The combination of easy access and multiple perceived benefits has contributed to the widespread and intensive use of the internet.

The growing reliance on the internet has been accompanied by an increasing frequency of social media use. Recent digital reports indicate that in 2025, Indonesia had approximately 180 million active social media user identities, accounting for around 63% of the total population [2]. Social media functions as a digital platform that enables social interaction without temporal or geographical boundaries. Various platforms are commonly used, including Instagram, Twitter, TikTok, YouTube, and Facebook. These platforms encourage continuous interaction, self-presentation, content creation, and expand marketing which can intensify users' involvement and exposure to others' activities [3]. Content shared on social media can be viewed not only by close contacts but also by a broader and often unfamiliar audience, reinforcing continuous connectivity and social exposure among users.

This persistent desire to remain connected to others' activities is closely associated with the phenomenon known as fear of missing out (FoMO), defined as a form of anxiety or apprehension arising from the perception that others are experiencing rewarding events from which one is absent, accompanied by a strong desire to stay connected to others' activities in the online environment [4]. Previous research shown that FoMO is associated positively to the intensity of social media engagement [5]. Individuals who fear that their peers are having more meaningful or enjoyable experiences may experience persistent anxiety when they are not aware of others' activities on social media [6]. Individuals experiencing FoMO often feel compelled to participate in similar activities or to possess similar goods in order to avoid feeling left behind. This tendency extends to consumption behaviour. Prior studies have demonstrated that FoMO can influence purchase intention and increase the likelihood of unplanned consumption [7, 8]. Such consumption is frequently spontaneous and unplanned, commonly referred to as impulsive buying. Impulsive buying is characterized as a sudden purchase made without prior intention or careful consideration [9, 10].

Generation Z represents a cohort that has grown up in a fully digital environment, characterized by constant connectivity and immediate access to online information [11]. As a generation deeply embedded in digital technology and social media environments, Generation Z is particularly susceptible to experiencing FoMO [4]. Given this context, this study aims to investigate how personal attributes and social media engagement relate to fear of missing out (FoMO) and impulsive buying tendencies among Generation Z. It also evaluates the explanatory power of these factors in predicting impulsive buying behaviour.

Despite the growing body of research on social media use and impulsive buying behaviour, empirical findings remain inconsistent, particularly regarding the direct role of social media exposure in triggering impulsive purchases. While some studies report a direct association between social media use and impulsive buying, others suggest that such behaviour is not solely driven by media exposure but depends on underlying psychological mechanisms [12,13]. In this context FoMO has emerged as a relevant construct, yet its role is often examined as an independent predictor rather than as a mediating process. Addressing this gap, the present study positions FoMO as a mediating mechanism linking social media use and impulsive buying behaviour among Generation Z, thereby providing a deeper insight into consumption behaviour within digitally interconnected social media ecosystems [10]. The conceptual framework (Figure 1) illustrates the relationship between variables.

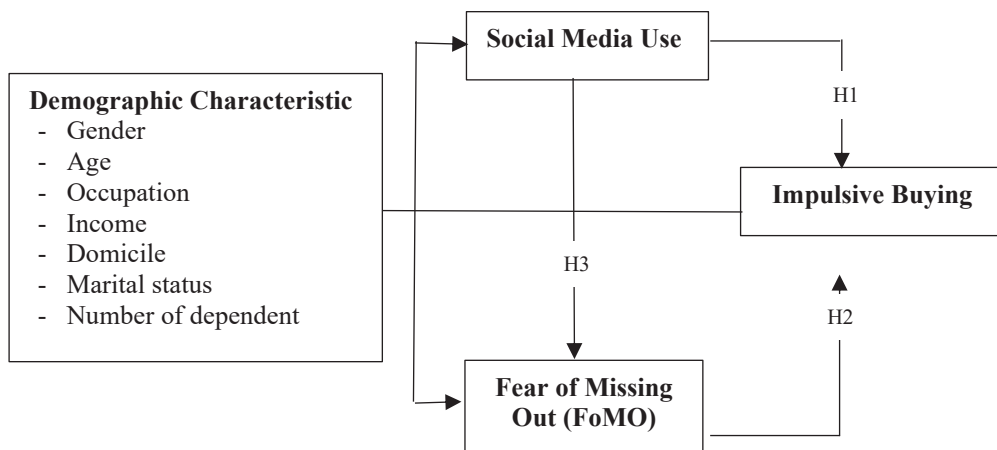


Fig. 1. Research framework

## 2 Research method

### 2.1 Research design and timeline

This research adopted a quantitative explanatory design to explore the links between social media use, FoMO, and impulsive buying behavior. Data were obtained through a structured online questionnaire distributed across social networking channels, a method considered appropriate given the digitally oriented characteristics of the study population. This study was conducted from April until September 2023 and involved respondents from various regions in Indonesia.

### 2.2 Data collection

The study population consisted of Indonesian Generation Z individuals aged 18-26 years. This age group represents one of the largest segments of internet and social media users in Indonesia. A purposive sampling technique was applied, with respondents selected based on the following criteria: (1) active social media users and (2) individuals who had previously purchased or consumed goods or services, either online or offline.

Data collection was conducted through a structured questionnaire completed independently by respondents and administered in an online format using Google Forms. The survey link was distributed through various social media (Instagram and WhatsApp). This approach was considered appropriate given the high level of social media engagement among Generation Z and the study's focus on digital consumption behavior. The questionnaire remained open for approximately two months. During this period, responses were monitored to ensure completeness and consistency. A total of 237 valid responses were obtained. This sample size meets the minimum requirement for structural equation modeling (SEM) analysis.

## **2.3 Research variables**

Social media use was measured using a modified version of the Facebook Intensity Scale [3]. The instrument captured both behavioral aspects, such as platform usage and time spent on social media, and attitudinal aspects related to the perceived importance of social media.

Fear of missing out (FoMO) was measured using an adapted version of the FoMO scale developed by Przybylski et al. [4], which reflects individuals' feelings of anxiety and concern regarding others' social experiences. Meanwhile, impulsive buying behavior was measured using an adapted impulsive buying scale based on the conceptualization proposed by Rook and Fisher [9].

All variables were measured using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The measurement instruments demonstrated acceptable reliability and consistency.

## **2.4 Research ethics**

Respondents took part in the study on a voluntary basis. Prior to completing the survey, participants received information of the study's aims and provided their consent to participate. This research did not request identifying details, and individual responses were handled with strict confidentiality. The information gathered was intended only for academic analysis and is presented in aggregated form.

## **2.5 Data analysis**

Data processing was carried out with the support of Microsoft Excel, IBM SPSS Statistics 25, and SmartPLS 3. Descriptive analysis was employed to present an overview of participant profiles as well as the distribution patterns of the research variables. Correlation and regression analyses were performed to examine initial relationships among variables. Structural equation modelling using the partial least squares approach (SEM-PLS) was employed to test the hypothesized direct and indirect relationships between social media use, FoMO, and impulsive buying behaviour. A bootstrapping procedure was applied to assess statistical significance, with path coefficients considered significant at a  $p\text{-value} \leq 0.05$  or a  $t\text{-value} \geq 1.96$ .

# **3 Results**

## **3.1 Respondent characteristics**

The gender of respondents in this study was mostly female (85.7%). The largest proportion of respondents were aged 21 years (33.8%), and West Java represented the most common area of residence (32.9%). Most respondents were students (89.5%). Half of the respondents have an income below 1 million rupiah/month (57.4%). Almost all respondents were unmarried (99.6%) and reported having no dependents (95.8%).

## **3.2 Social media use, Fear of Missing Out (FoMO), and impulsive buying**

Social media use in this research was assessed based on several indicators, including the types of social media platforms used, the number of accounts followed, the number of influencers or public figures followed, daily time spent on social media, and respondents' attitudes toward social media. The results indicate that Instagram was the most frequently

used platform (87.3%). The largest proportion of respondents reported following between 201 and 500 accounts (20.3%), while more than half followed fewer than 50 influencers or public figures (56.5%). In terms of usage intensity, the majority of respondents spent more than three hours per day on social media (57.8%).

FoMO was measured using items reflecting feelings of fear, concern, and anxiety related to others' experiences, whereas impulsive buying behavior was assessed through items capturing respondents' purchasing tendencies. The distribution of respondents across categories of social media use, FoMO, and impulsive buying (Table 1).

**Table 1.** Social media use, Fear of Missing out (FoMO), and impulsive buying

Category	Social Media Use		Fear of Missing Out (FoMO)		Impulsive Buying	
	n	%	N	%	n	%
Low (<60)	104	43.9	172	72.6	204	86.1
Moderate (60-79)	96	40.5	50	21.1	26	11.0
High (≥80)	37	15.6	15	6.3	7	3.0
Total	237	100.0	237	100.0	237	100.0
Min-max	0.00 – 100.00		0.00 – 100.00		5.56 – 88.89	
Average ± SD	63.08±18.49		48.33±18.33		41.13±16.97	

Overall, all three variables were dominated by the low category. The mean index scores for social media use, FoMO, and impulsive buying were 63.08, 48.33, and 41.13, respectively.

### 3.3 Correlations between respondents characteristics, social media use, FoMO, and impulsive buying

Correlation analysis was performed to explore the associations among respondent characteristics, the use of social media, fear of missing out (FoMO), and impulsive buying tendencies. The findings revealed a significant inverse correlation between age and the use of social media, indicating that younger participants tended to demonstrate higher levels of use. A similar negative association was found between employment status and social media engagement, suggesting that students were more actively involved in social media activities compared to those who were employed.

In addition, social media use was positively and significantly correlated with FoMO and impulsive buying behavior. FoMO was also positively and significantly correlated with impulsive buying (Table 2).

**Table 2.** Correlations analysis results

Variable	SMU	FoMO	IB
Gender	0.109	0.020	0.053
Age	-0.188**	-0.065	0.009
Domicile	0.018	-0.012	0.060
Occupation	-0.126*	-0.015	-0.054
Income per month	-0.027	0.082	0.041
Marrital Status	-0.066	-0.034	-0.026
Number of dependant	0.052	0.072	0.066

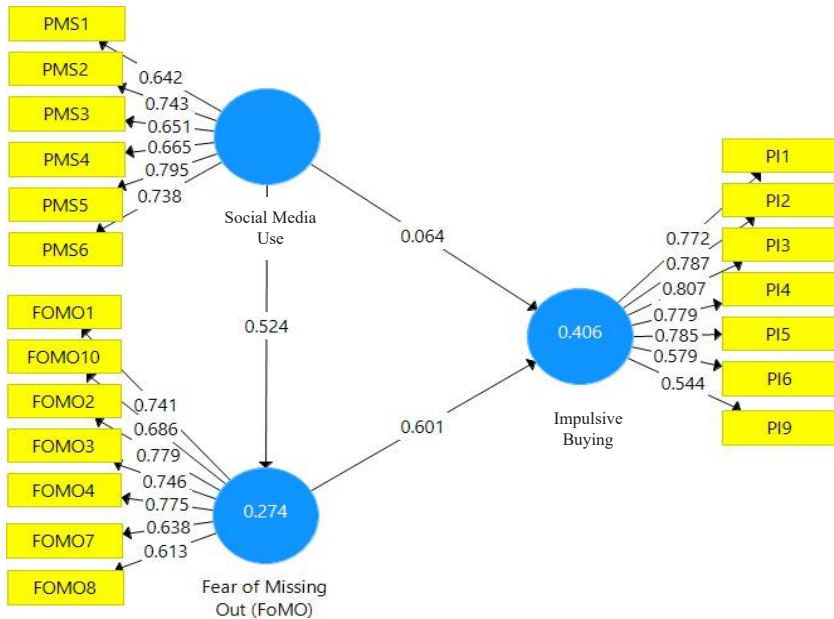
**Table 2.** Correlations analysis results (continue)

Variable	SMU	FoMO	IB
Social Media Use	1	0.560**	0.374**
Fear of missing out (FoMO)	0.560**	1	0.657**
Impulsive Buying	0.374**	0.657**	1

Note: \*)Significant at  $p < 0.05$ , \*\*)Significant at  $p < 0.01$ , SMU= Social Media Use, FoMO= Fear of Missing Out, IB= Impulsive Buying

### 3.4 Structural Equation Modeling (SEM) analysis

The evaluation of the outer model was performed by examining factor loadings, average variance extracted (AVE), and composite reliability (CR). Indicators with factor loadings below 0.50 were removed to improve construct validity. As a result, one FoMO indicator (FOMO) and two impulsive buying indicators (PI7 and PI8) were excluded from this study. The final measurement model is presented in Figure 2.



**Fig. 2.** The final research model illustrating the relationship among social media use, fear of missing out (FoMO), and impulsive buying.

All constructs demonstrated satisfactory reliability and convergent validity, with AVE values exceeding 0.50 and CR values exceeding the recommended threshold. Model fit was assessed using the standardized root mean square residual (SRMR). The SRMR value of 0.088 indicates an acceptable model fit. The inner model evaluation showed an adjusted R<sup>2</sup> value of 0.400 for impulsive buying behavior, indicating a moderate explanatory power. This suggests that social media use and FoMO together explained 40.0% of the variance in impulsive buying behavior. The reliability, validity, model fit indices, and R<sup>2</sup> values are summarized in Table 3.

**Table 3.** Construct reliability, convergent validity, model fit, and R<sup>2</sup> values

<b>Construct reliability (CR) and average variance extract (AVE)</b>			
<b>Variable</b>	<b>Composite Reliability (CR)</b>	<b>Average Variance Extracted (AVE)</b>	
Social Media Use	0.857	0.501	
Fear of missing out (FoMO)	0.878	0.510	
Impulsive Buying	0.886	0.531	
<b>Model fit test</b>			
<b>Model fit indicator</b>	<b>Cut off-value</b>	<b>Results</b>	<b>Fit Interpretation</b>
Standardized Root Mean Square (SRMR)	<0.1	0.088	Good fit
<b>R-square and R-square adjusted</b>			
	<b>R-Square</b>	<b>R-Square Adjusted</b>	
Impulsive buying	0.406	0.400	

### 3.5 Hypothesis testing

The findings indicate that social media use did not exert a significant direct influence on impulsive purchasing behaviour ( $\beta = 0.064$ ;  $p = 0.307$ ), resulting in the non-support of Hypothesis 1. Conversely, FoMO demonstrated a positively significantly impact on impulsive buying behaviour ( $\beta = 0.601$ ;  $p < 0.001$ ), thereby confirming Hypothesis 2. Additionally, social media engagement showed a positively significantly effect on FoMO ( $\beta = 0.524$ ;  $p < 0.001$ ), lending support to Hypothesis 3 (Table 4).

**Table 4.** Path coefficients and hypothesis testing results

<b>Path</b>	<b>Path Coefficients</b>	<b>t- statistic</b>	<b>p- values</b>	<b>Conclusion</b>
Social Media Use→Impulsive Buying	0.064	1.024	0.307	H1 rejected
FoMO → Impulsive uring	0.601	11.101	0.000	H2 accepted
Social Media Use → FoMO	0.524	10.674	0.000	H3 accepted

Further analysis was conducted to examine direct, indirect, and total effects among the study variables. The findings indicate that social media use had a significant indirect effect on impulsive buying behavior through FoMO ( $\beta = 0.315$ ). This finding confirms the mediating role of FoMO in the relationship between social media use and impulsive buying behavior (Table 5).

**Table 5.** Direct, indirect, and total effects

<b>Variabel</b>	<b>Direct Effect</b>	<b>Indirect Effect</b>	<b>Total Effect</b>
Social Media Use→Impulsive Buying	0.064	0.315*	0.379*
Social Media Use→ FoMO	0.524*	-	-
FoMO → Impulsive Buying	0.600*	-	-

Note: \* indicates a significant effect based on bootstrapping; the 95% confidence interval does not include zero

### **3.6 Discussion**

The findings suggest that demographic and socioeconomic do not significantly influence impulsive purchasing behaviour. This implies that, in this study, impulsive buying tendencies among Generation Z are relatively consistent across different background characteristics. Similar patterns have been reported in recent studies showing that impulsive buying in digital contexts is not consistently explained by demographic characteristics but is more strongly associated with psychological and situational factors related to online environments [10, 13]. These results suggest that for Generation Z, impulsive buying tendencies are less structurally determined and more closely linked to internal psychological mechanisms shaped by digital engagement. This pattern is consistent with prior evidence showing that financial and consumption-related behaviors among young adults are more strongly influenced by attitudinal and psychological factors than by demographic characteristics alone [14, 15].

The results further show that social media use does not affect directly on impulsive buying behavior, non-support of Hypothesis 2. This finding indicates that higher intensity of social media use alone does not necessarily trigger impulsive purchasing. While social media has often been associated with consumption-related outcomes, evidence suggests that its influence on impulsive buying is conditional rather than automatic [12, 13]. The present study extends this perspective by demonstrating that social media use influences impulsive buying indirectly through fear of missing out (FoMO), highlighting the importance of psychological mediation processes.

Individuals with high levels of social media use are more frequently exposed to curated content, including influencer endorsements and displays of consumption experiences. Such exposure may intensify social comparison and heighten FoMO, which subsequently encourages impulsive purchasing behavior. This mechanism is consistent with prior findings indicating that FoMO serves as a critical link between social media exposure and consumption-related responses [7, 8]. These results reinforce the argument that social media environments shape consumer behavior primarily through emotional and cognitive pathways rather than direct behavioral stimulation.

The results further demonstrate that fear of missing out (FoMO) exerts a significant positive influence on impulsive buying behaviour, thereby supporting Hypothesis 3. Individuals who experience elevated levels of FoMO are more inclined to make spontaneous and unplanned purchases as a way to cope with anxiety or the perception of being socially left out. Similar relationships between FoMO and impulsive or unplanned consumption have been documented in studies examining emotionally driven purchasing behavior in digital environments [7, 10]. In this context, FoMO functions as a motivational force that increases urgency and reduces deliberation during purchasing decisions.

Finally, the analysis reveals that social media engagement significantly predicts FoMO, supporting Hypothesis 4. Greater involvement in social media is associated with heightened FoMO, as frequent exposure to others' activities fosters social comparison and intensifies related anxiety [4, 5]. This pattern is particularly salient among Generation Z, whose daily routines are deeply embedded in digital and social media ecosystems [11].

Several limitations of this study should be acknowledged. First, the analysis focuses on a restricted age range within Generation Z (18-26 years), with an uneven distribution dominated by respondents aged 21 years. Second, the geographical coverage was limited to 16 out of 38 provinces in Indonesia, with a concentration of respondents in Java. Third, the sample was relatively homogeneous in terms of employment status, as most participants were students. These limitations are partly attributable to the use of online data collection via social media, which constrains control over sample composition and may introduce selection bias. Future studies are encouraged to employ more diverse sampling strategies, include broader age ranges and occupational groups, and further explore psychological mechanisms underlying digital consumption behavior.

### **3.7 Implications**

From a theoretical perspective, the results highlight the role of fear of missing out (FoMO) as a key psychological mechanism linking social media use and impulsive buying behavior. Rather than treating social media exposure as a direct trigger of impulsive consumption, this study demonstrates that its influence operates through emotional and cognitive responses related to social comparison and perceived exclusion. This finding contributes to the consumer behavior literature by clarifying why previous studies have reported inconsistent results regarding the direct effect of social media use on impulsive buying.

From a practical perspective, the results suggest that efforts to reduce impulsive buying among Generation Z should focus not only on limiting social media use but also on addressing the psychological pressures associated with social media environments. Interventions such as digital literacy programs, financial education, and awareness campaigns may be more effective when they emphasize emotional regulation, self-control, and critical engagement with online content rather than simply reducing screen time. For marketers and content creators, the findings also underline the ethical importance of considering how social media content may intensify FoMO and encourage unplanned consumption, particularly among young consumers.

## **4 Conclusion and recommendations**

### **4.1 Conclusion**

This study involved 237 respondents belonging to Generation Z in Indonesia, with the sample predominantly consisting of female students aged 21 years, residing mainly in West Java, with relatively low monthly income, unmarried status, and no dependents. Correlation analysis showed a significant negative correlation between age and social media use, indicating that younger respondents tended to report higher levels of social media use.

SEM findings reveal that social media engagement significantly affects FoMO, which in turn positively influences impulsive buying behaviour. However, social media engagement does not directly lead to impulsive purchasing; its impact is mediated through FoMO. This indicates that impulsive buying among Generation Z is shaped more by psychological responses to social media, such as anxiety and fear of exclusion, than by usage intensity alone.

### **4.2 Recommendations and future research**

The results show that Generation Z spends a substantial amount of time on social media, with most respondents reporting more than three hours of daily use. This level of exposure warrants attention, as frequent social media use may increase the risk of experiencing FoMO and developing impulsive buying tendencies. Given that a notable proportion of respondents exhibited moderate levels of FoMO, preventive efforts are needed to avoid escalating to higher levels. Generation Z is therefore encouraged to engage more mindfully with social media, including setting personal boundaries on usage and developing greater self-awareness regarding emotional responses to online content.

For future research, further investigation is needed to explore the impact of FoMO on consumer behavior by incorporating additional variables, such as electronic word of mouth (e-WOM), financial decision-making, or investment behavior. Future studies are also encouraged to employ more diverse and evenly distributed samples in terms of age, geographic location, and occupational background to improve generalizability. Comparative

studies across different generational cohorts, including Generation Alpha or cross-generational analyses, would also provide valuable insights into how digital environments shape consumption behavior over the course of life.

## References

1. Asosiasi Penyelenggara Jasa Internet Indonesia, Indonesia Internet Profile 2025. APJII, Jakarta (2025). <https://survei.apjii.or.id/>
2. DataReportal, Digital 2025: Indonesia, Kepios (2025). <https://datareportal.com/reports/digital-2025-indonesia>
3. N.B. Ellison, C. Steinfield, C. Lampe, The benefits of Facebook friends: Social capital and college students' use of online social network sites. *J. Comput.-Mediat. Commun.* **12**, 4 (2007). <https://doi.org/10.1111/j.1083-6101.2007.00367.x>
4. A.K. Przybylski, K. Murayama, C.R. DeHaan, V. Gladwell, Motivational, emotional, and behavioral correlates of fear of missing out. *Comput. Hum. Behav.* **29**, 4 (2013). <https://doi.org/10.1016/j.chb.2013.02.014>
5. J.A. Roberts, M.E. David, The social media party: Fear of missing out, social media intensity, connection, and well-being. *Int. J. Hum.-Comput. Interact.* **36**, 4 (2020). <https://doi.org/10.1080/10447318.2019.1646517>
6. A. Tandon, A. Dhir, S. Talwar, P. Kaur, M. Mäntymäki, Dark consequences of social media-induced fear of missing out: Social media stalking, comparisons, and fatigue. *Technol. Forecast. Soc. Change.* **171**, 120931 (2021). <https://doi.org/10.1016/j.techfore.2021.120931>
7. M.C. Good, M.R. Hyman, Direct and indirect effects of fear-of-missing-out appeals on purchase likelihood. *J. Consum. Behav.* **20**, 3 (2021). <https://doi.org/10.1002/cb.1885>
8. T.C.T. Dinh, Y. Lee, I want to be as trendy as influencers: How fear of missing out leads to buying intention for products endorsed by social media influencers. *J. Res. Interact. Mark.* **16**, 1 (2022). <https://doi.org/10.1108/JRIM-01-2021-0022>
9. D.W. Rook, R.J. Fisher, Normative influences on impulsive buying behavior. *J. Consum. Res.* **22**, 3 (1995). <https://doi.org/10.1086/209452>
10. Y. Zhao, Y. Li, N. Wang, R. Zhou, X.R. Luo, A meta-analysis of online impulsive buying and the moderating effect of economic development level. *Inf. Syst. Front.* **24**, (2022). <https://doi.org/10.1007/s10796-021-10170-4>
11. C. Montag, S. Diefenbach, Towards Homo Digitalis: Important research issues for psychology and the neurosciences at the dawn of the Internet of Things and the digital society. *Sustainability.* **10**, 2 (2018). <https://doi.org/10.3390/su10020415>
12. A. Thourmrunroje, A cross-national study of consumer spending behavior: The impact of social media intensity and materialism. *J. Int. Consum. Mark.* **30**, 4 (2018). <https://doi.org/10.1080/08961530.2018.1462130>
13. J. Cavazos-Arroyo, A.I. Maynez-Guaderrama, Antecedents of online impulse buying: An analysis of gender, centennials, and millennials. *J. Theor. Appl. Electron. Commer. Res.* **17**, 1 (2022). <https://doi.org/10.3390/jtaer17010007>
14. H. Khalisharani, I.R. Johan, M.F. Sabri, The influence of financial literacy and attitude towards financial behaviour amongst undergraduate students: A Cross-country evidence. *Pertanika J. Soc. Sci. Hum.* **30**, 2 (2022). <https://doi.org/10.47836/pjssh.30.2.03>

15. I. Johan, K. Rowlingson, L. Appleyard, The effect of personal finance education on the financial knowledge, attitudes and behaviour of university students in Indonesia. *J. Fam. Econ. Issues.* **42**, (2021). <https://doi.org/10.1007/s10834-020-09721-9>