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Online Buying Behaviour among Youth: A Multigroup Analysis Based on Gender

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Abstract
This study intended to explore the effect of financial literacy, social media use, and pay-later promotion on online impulsive and compulsive buying among youth. Using partial least squares structural equation modelling (PLS-SEM), 366 valid responses were analysed. Additionally, a moderation analysis using multigroup analysis (MGA) was conducted to determine if there are gender differences in these relationships. The finding revealed that of the three predictors of impulsive buying, only social media use had a positive and significant impact, while impulsive buying became a crucial determinant for compulsive buying. Interestingly, this study found that gender did not moderate the relationships outlined in the proposed model, indicating that the effects were similar for both males and females. This study suggests that youth should be wise in using social media, as it could lead to excessive purchasing that worsens the financial and psychological condition of both males and females.

Keywords: Compulsive Buying, Financial Literacy, Impulsive Buying, Multigroup Analysis, Social Media

Perilaku Pembelian Online di Kalangan Generasi Muda: Analisa Multigrup Berdasarkan Gender

Abstrak
Studi ini bertujuan untuk mengeksplorasi pengaruh literasi keuangan, penggunaan media sosial, dan promosi *pay-later* pada pembelian impulsif dan kompulsif online di kalangan remaja. Penelitian ini menggunakan partial least squares structural equation modelling (PLS-SEM) dengan 366 respons valid dianalisis. Selain itu, analisis moderasi melalui analisis multigrup (MGA) dilakukan untuk menentukan apakah ada perbedaan gender dalam hubungan ini. Temuan tersebut mengungkapkan bahwa dari tiga prediktor pembelian impulsif, hanya penggunaan media sosial yang memiliki dampak positif dan signifikan, sementara pembelian impulsif menjadi penentu penting untuk pembelian kompulsif. Menariknya, studi ini menemukan bahwa gender tidak memoderasi hubungan yang terdapat dalam model yang diusulkan, yang menunjukkan bahwa efeknya serupa untuk pria dan wanita. Studi ini menunjukkan bahwa remaja harus bijaksana saat menggunakan media sosial, karena pembelian berlebihan dapat memperburuk kondisi keuangan dan psikologis pria dan wanita.

Kata Kunci: Pembelian Impuslif, Pembelian Kompulsif, Literasi Keuangan, Social Media, Analisa Multigrup

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INTRODUCTION

The improvement of digital infrastructures brought a major shift in people's lifestyle transactions, with no exception in Indonesia. Indonesians have considerably utilised e-

money and/or e-wallets for transactions since 2017. The rapid increase in e-money for transactions was also driven by financial technology (fintech) companies' expansion, which provides a wide range of services. The examples are ride-hailing services provided by Gojek and Grab and payment services, such as Go-Pay and OVO. The development of fintech companies in Indonesia leads to online shopping mushrooming, due to its advantages for consumers, such as flexibility, ease, lower prices, and a wide range of choices. Data have shown that Indonesia had the highest e-commerce adoption in 2021, indicated by 87.1% of internet users in Indonesia who have made online purchases in a month (Hootsuite, 2021). The development of fintech, however, is like a double-edged sword. Although it could accelerate economic growth, it also exposes risks associated with inadequate user knowledge about the products/services (Liao, Huang, & Hsieh, 2016). Based on the survey conducted by the Indonesian financial services authority – OJK, the financial literacy rate in Indonesia was considered low, especially among the younger group (16%) (Otoritas Jasa Keuangan (OJK), 2019). Therefore, Indonesian youth remain vulnerable to making incorrect financial and purchasing decisions, such as difficulty in deciding which products they truly want and need. Further, it is also found out that financial behaviour among the young generation has a significant impact on financial well-being (Margasari, Andhini, Musaroh, & Bandara, 2024).

In this digital era, purchasing stimuli can arise from one's interaction with the internet: surfing, socialising through social media or accessing e-commerce applications. As their life must be connected to social media, sharing activities and updating statuses become the youth's daily routine. Thus, social media, including Instagram, Facebook, Twitter, etc., has a powerful impact on the youth's transaction behaviour (Kazi, Khokhar, Qureshi, & Murtaza, 2019; She, Rasiah, Waheed, & Sharif, 2021; Triwidisari, Nurkhin, & Muhsin, 2018). Marketing strategies also evolved as more people nowadays prefer online buying in e-commerce. Currently, e-commerce has provided conveniences and various incentives, such as pay-later and discounts.

Thus, in accordance with the current evidence in Indonesia, this research aims to investigate the effect of financial literacy, social media use, and pay-later promotion on purchasing behaviour among youth in Indonesia. Purchasing behaviour in this study consists of impulsive and compulsive buying. People who used to buy impulsively will tend to buy compulsively, which could harm their quality of life (Darrat, Darrat, & Amyx, 2016). The target sample focuses on university students in Malang, Indonesia. Understanding the specific aspect that contributed to incorrect purchasing behaviour could provide valuable insights for financial authorities as well as policymakers at educational institutions to formulate an effective financial education program for the youth.

The current study would offer additional value to the body of knowledge by considering the economic aspect of buying behaviour studies since previous studies in this field focused more on psychological and social aspects rather than economic factors (see Eroğlu & Bilgen Kocatürk (2020), Moon & Attiq (2018), Rahman, Islam, Esha, Sultana, & Chakravorty (2018)). Moreover, several studies have already incorporated financial literacy in modelling purchasing behaviour, such as the study by Anisa, Arifin, Setyowati, Hidayah, & Megasari (2020), Ayuningtyas & Irawan (2021), Triwidisari, Nurkhin, & Muhsin (2018), Wulandari & Damayanti (2022); however, they did not incorporate all three dimensions in

financial literacy, i.e. financial attitude, financial behaviour and financial knowledge. Hence, this study attempts to fill the gap in the previous studies by considering all aspects of financial literacy as suggested by the literature (OECD/INFE, 2015; Potrich, Vieira, & Kirch, 2015). Lastly, this study carried out a multigroup analysis by implementing measurement invariance as a precondition to run a multigroup analysis. Thus, a thorough analysis is expected to gain better research findings that mirror the actual phenomena in population conditions.

METHOD

This study applied a quantitative research design using a survey questionnaire to investigate the effect of financial literacy, social media use, and pay-later promotion on impulsive buying and compulsive buying among university students at one of the universities in Malang, Indonesia. The questionnaire in this study was adopted from the previous studies and was adapted to meet the research objectives (see Table 1). The questionnaire survey items were measured using a five-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree, except for financial knowledge (one of the financial literacy dimensions), which has correct and incorrect answers. Later, the financial literacy variable is presented as a score/index, which consists of financial attitude, financial behaviour and financial knowledge; the calculation follows the procedure from OECD/INFE (2015) (see Appendix).

Table 1. *Questionnaire Items*

Construct	Questionnaire items	Adapted from
Impulsive buying	1. I often buy things online spontaneously. 2. I often buy things online without thinking. 3. I buy things online according to how I feel at the time. 4. I consider myself an online impulse purchaser.	Olsen et al. (2021)
Compulsive buying	1. I often spend more online than I can afford. 2. I consider myself an online 'shopaholic'. 3. Much of my life is centred around online shopping. 4. I spend a lot of time thinking of or planning online. shopping/buying.	Olsen et al. (2021)
Financial attitude	1. It is important to set goals for the future. 2. I am willing to spend money on things that are important to me. 3. I believe how I manage my money will affect my future. 4. I do not worry about the future; I live only in the present.	Potrich et al. (2015)
Financial behavior	1. I have a budget plan (income and expenses). 2. I compare prices when making a purchase. 3. I will save regularly to achieve long-term goals, such as children's education and home purchasing. 4. I will start saving more when I get extra money.	Potrich et al. (2015)
Financial knowledge	1. Assume you have IDR 10,000,000 in your savings account at an interest rate of 10% per year. How much will your savings account be after five years? * More than IDR 15,000,000. IDR 15,000,000.	Potrich et al. (2015)

Construct	Questionnaire items	Adapted from
	Less than IDR 15,000,000. I do not know. 2. If the current interest rate on your savings account is 6% per year and the inflation rate is 10% per year. After one year, how much will you be able to buy with the money from that account? More than today. * Less than today. Exactly the same. I do not know. 3. Which assets usually offer higher returns over a longer period of time, say 10 years? Savings account. Government securities. *Stocks. I do not know. 4. Assume you see the same gadget at two different stores for the initial price of IDR 1,000,000. Shop A offers a discount of IDR 150,000, whereas Shop B offers a discount of 10%. What is the best alternative? * Buying in shop A (discount of IDR 150,000). Buying in shop B (discount of 10%). I do not know	
Social media use	1. I feel that my social media use is out of control. 2. I spent more time than I planned to use social media. 3. I feel anxious when I cannot access social media. 4. I use social media to escape from problems or to relieve myself from unhappy feelings.	Sharif, S. P., & Yeoh, K. K. (2018).
Pay-later promotion	1. I think the submission process for pay-later in the marketplace is easy. 2. I think the submission process for pay-later in the marketplace is fast. 3. I think the pay-later feature offers a low-interest rate. 4. I think purchasing with pay-later is cheaper than paying in cash.	Hilmi, L. D., & Pratika, Y. (2021)

As the questionnaire was returned, the data would be analysed with PLS-SEM by using SmartPLS software. This study also checked whether any relationships in the model are moderated by gender by applying a multigroup analysis (MGA), also known as PLS-MGA. PLS-MGA is suitable for categorical variables and could perform well with large sample data (Hair, Sarstedt, Ringle, & Gudergan, 2018; Sarstedt, Henseler, & Ringle, 2011). As the population of this study is 4,385, by applying the Krejcie and Morgan formula with a confidence interval and 5% error margin, the minimum sample size is calculated as 357 (Krejcie & Morgan, 1970). The research model can be seen in Figure 1.

Based on the research model in Figure 1, five hypotheses are developed as follows:

H1: There is a significant effect of financial literacy on impulsive buying

Financial literacy, the ability to manage money or make financial decisions, can be measured by three elements/dimensions: financial attitudes, financial behaviour, and financial knowledge (Hastings, Madrian, & Skimmyhorn, 2013; OECD/INFE, 2015;

Potrich et al., 2015). By having a high score in financial literacy, one is expected to have better knowledge to utilise and make financial choices, and vice versa; a low level of financial literacy could lead to making incorrect economic decisions, such as being trapped in indebtedness (Potrich & Vieira, 2018) or impulsive and compulsive buying (Triwidisari et al., 2018; Wahono & Pertiwi, 2020).

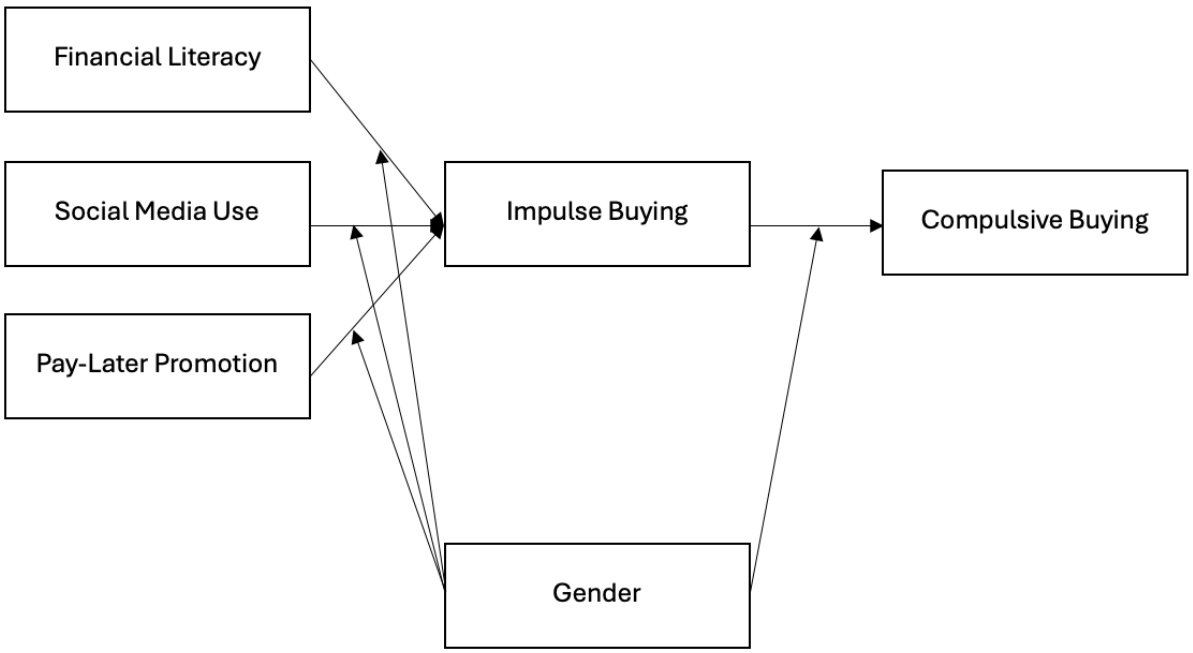

Figure 1. The Research Model

H2: There is a significant positive effect of social media use on impulsive buying.

In this digital era, purchasing stimuli can arise from an internet interaction through social media or e-commerce applications. Young people's life cannot be separated from social media; sharing activities and updating statuses become their daily routine. Thus, social media has a powerful impact on their transaction behaviour. Through the lens of traditional literature, social media interaction could be categorised into external stimuli from reference groups for consumer behaviour (Neal, Quester, & Hawkins, 2004). Most studies on purchasing behaviour included social media use as one of the buying behaviour predictors (Kazi et al., 2019; Sharif & Yeoh, 2018; She et al., 2021; Triwidisari et al., 2018).

H3: There is a significant positive effect of pay-later promotion on impulsive buying.

Pay-later is considered a new mode of payment in online shopping, which is similar to using a credit card. The study performed by Pradhan, Israel, & Jena (2018) confirmed that materialism, values that consider worldly things important, affected credit card use among adult consumers. Subsequently, the use of credit cards could increase the propensity for impulsive buying. Further, a study in the Indonesian context carried out by Simanjuntak & Rosifa (2016) also shared a similar finding. Another study by Wulandari & Damayanti (2022) suggested that the pay-later mode positively affected impulsive buying. Also, Ah

Fook & McNeill (2020) confirmed that the pay-later program, as one of the market stimuli, had a close relation to the impulse buying of young adult females.

H4: There is a significant positive effect of impulsive buying on compulsive buying.

Impulsive and compulsive buying behaviour studies were explored extensively by incorporating psychological aspects (Adamczyk, 2021; Eroğlu & Bilgen Kocatürk, 2020; Harnish & Bridges, 2015). Several scholars are interested in investigating the interaction between impulsive buying and compulsive buying; Moon, Farooq, & Kiran (2017) were some of them. They found out that impulsive buying positively and significantly affected compulsive buying. Using the indirect effect of impulsive buying on compulsive buying, Darrat, Darrat, & Amyx (2016) also discovered that impulsive buying had a positive impact on compulsive buying, which is mediated by anxiety.

H5: The relationship between financial literacy, social media use, Pay-later promotion, impulsive buying and compulsive buying will be moderated by gender.

Researchers were also interested in exploring the socio-demographic aspects, such as gender, level of education and income, while studying purchase behaviour (Adamczyk, 2021; Gogoi & Shillong, 2020; Jaspal, Lopes, & Lopes, 2020). Furthermore, the studies carried out by Ah Fook & McNeill (2020) found that females were more prone to impulse buying. Adamczyk's study in 2021 also supported the idea that females have a propensity to buy compulsively because shopping becomes an activity to release their stress.

FINDING AND DISCUSSION

Descriptive statistic

This buying behaviour survey took two months, starting in August–September in 2022, with 387 responses achieved. However, only 366 responses were valid to be employed for further analysis. Of 366 respondents, 30.05% were male, and 69.95% were female. Most respondents have never studied economics other than entrepreneurship education, and most of them come from rural areas (69.67%). Furthermore, it was found that most respondents (75.68%) have a monthly income below Rp. 1,000,001 (around 70 USD). Before conducting inferential analysis using PLS-SEM, the researcher also analysed the survey responses to gain a general overview of respondents' perceptions and assist in interpreting the findings. An interesting finding was found in the responses for financial literacy (see Figure 2).

The survey responses indicated that the participants had a positive attitude and behaviour toward money and future planning. However, they seemed challenged in answering the financial knowledge questions, as less than 60% of the questions were answered correctly. Only 23% and 29% of respondents answered the compound interest and inflation questions correctly. In comparison, more than half of the respondents could correctly answer questions related to investment choice and comparing prices. Thus, when comparing the responses of financial knowledge and the previous two dimensions of financial literacy —financial attitude and financial behaviour— it revealed that the respondents demonstrated relatively strong financial attitudes and behaviours; however,

they showed limited understanding of financial knowledge. This finding aligns with the OECD survey, which found that Indonesia scored the third-highest in financial attitude and behaviour but the third-lowest in financial knowledge (OECD, 2020).

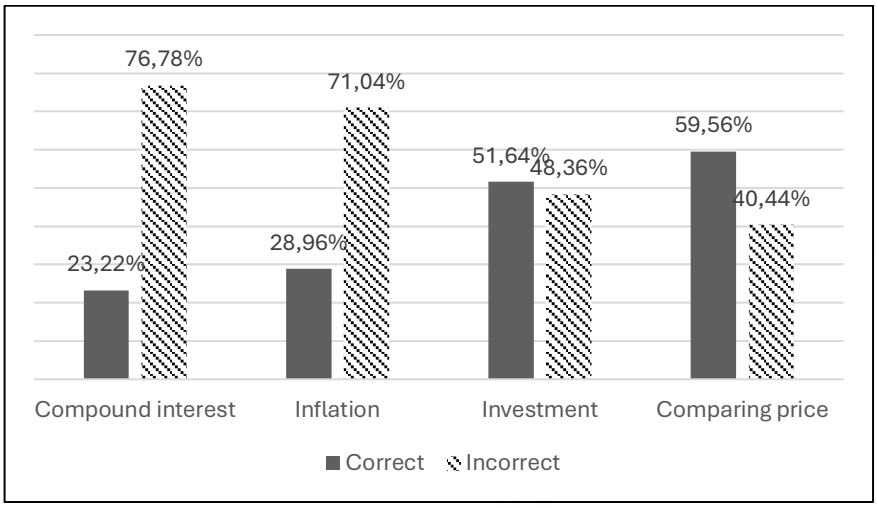

Figure 2. The Response of Financial Knowledge Items

Partial least squares structural equation modelling (PLS-SEM) analysis

This section outlines the two stages of PLS-SEM analysis. It begins with the assessment of the measurement model, which serves as a foundation for the subsequent structural model assessment used to address the research questions in this study. The result of the measurement model evaluation is shown in Table 2.

Table 2 presents the SmartPLS results, which show that all indicators met the accepted criteria for reliability and validity. However, a more detailed assessment of each indicator is outlined as follows. Based on the internal consistency reliability assessment, both Cronbach's alpha and composite reliability were all above 0.7, indicating that the indicators could satisfactorily portray the concepts of the constructs (FL, SM, PP, IB, CB). Furthermore, the outer loadings were statistically significant at the 1% level (t-statistic exceeded 2.56) and had a minimum score of 0.407 for CB4. Hair et al. (2017) stated that loading with 0.4 is still tolerable. Therefore, it suggests that the indicators demonstrated a sufficient correlation with their corresponding constructs. Lastly, the table also shows that the AVE scores exceed a cut-off value of 0.5 for all constructs. Thus, it is considered that their indicators could identify more than 50% of the variance of the constructs.

Table 2. *Measurement Model Assessment*

Construct	Indicator	Outer loading	Cronbach's alpha	Composite reliability	AVE
Financial literacy (FL)*	FLi	1	1	1	1
Social Media (SM)	SM1	0.810**	0.764	0.846	0.581
	SM2	0.824**			
	SM3	0.780**			

Construct	Indicator	Outer loading	Cronbach's alpha	Composite reliability	AVE
	SM4	0.617**			
Pay-later Promotion (PP)	PP1	0.846**	0.803	0.869	0.625
	PP2	0.780**			
	PP3	0.846**			
	PP4	0.678**			
Impulsive Buying (IB)	IB2	0.831**	0.834	0.889	0.668
	IB2	0.824**			
	IB3	0.751**			
	IB4	0.861**			
Compulsive Buying (CB)	CB1	0.773**	0.705	0.806	0.524
	CB2	0.868**			
	CB3	0.762**			
	CB4	0.407**			

Note:
* = Financial literacy is calculated as an index (based on three dimensions: financial attitude, financial behaviour and financial knowledge)
** = $p < 0.01$

The final evaluation in the measurement model is discriminant validity, which determines whether each construct is distinct from the others. This study utilised the HTMT score to assess the discriminant validity. It was found that all HTMT scores were acceptable, as the HTMT scores were less than 0.9, and the upper bounds of the confidence intervals were less than 1. Thus, the reliability and validity assessments for all constructs indicated that the measurement model was satisfactory and suitable for proceeding to the structural model analysis.

As shown in Figure 3, the PLS algorithm and bootstrapping analysis generated an R^2 value of 0.040 for impulsive buying (IB), indicating that financial literacy (FL), social media (SM), and pay-later promotion (PP) collectively accounted for only 4% of the variance in IB. In contrast, IB, the only predictor for compulsive buying (CB), could account for a 35.6% variation in CB. The low R^2 score for IB might correlate with the low path coefficients for IB predictors. Among the predictors of impulsive buying (IB), social media (SM) showed the strongest path coefficient at 0.17, followed by pay-later promotion (PP) at 0.09, and financial literacy (FL) at 0.006. The R^2 value for compulsive buying (CB) was 0.356, indicating moderate predictive power (see Chin, 1998). It was also supported by the path coefficient score for IB – CB, at 0.596.

Four hypotheses proposed in this study will be evaluated with the strength of each hypothesised relationship and its significance. Table 3 shows that the two relationships (SM – IB and IB – CB) were accepted, while others (FL – IB and PP – CB) were rejected based on the significance of the path relationship. The information in the table also supported the idea that the path coefficient with a low magnitude –less than 0.1– indicated an insignificant path relationship. Thus, it would also contribute to the coefficient of determination (R^2) score.

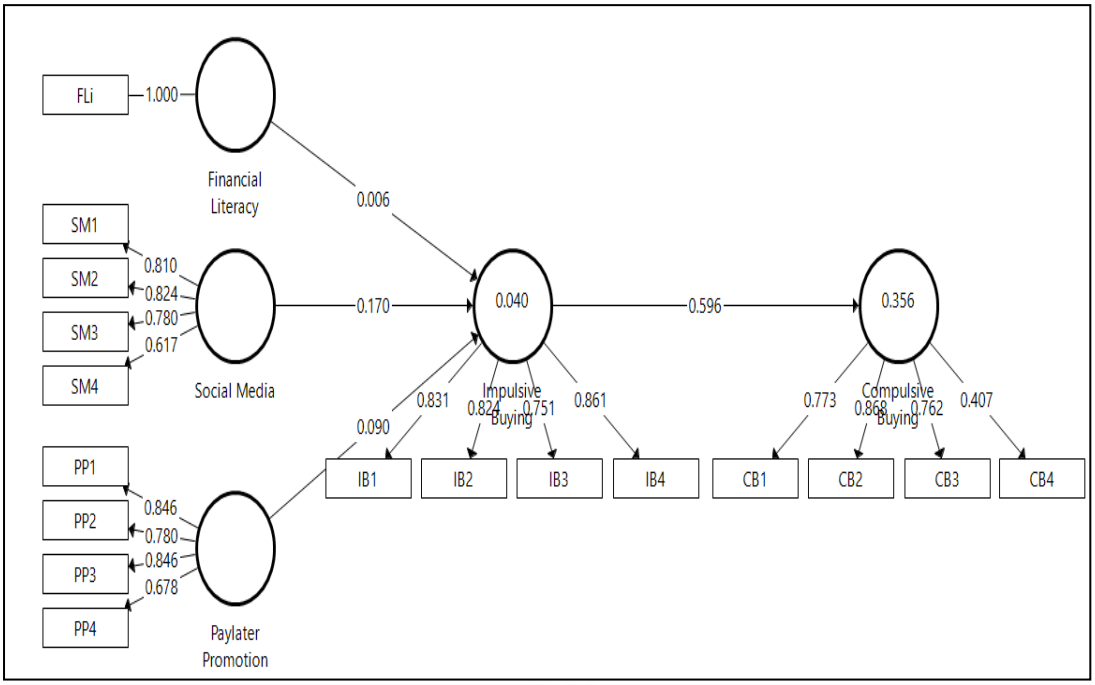

Figure 3. The PLS-SEM Analysis

Table 3. *Path Analysis*

Path relationship	Path coefficient (β)	T statistics	P values
FL => IB	0.006	0.108	0.914^{ns}
SM => IB	0.17	3.837	0**
PP => IB	0.09	1.309	0.191 ^{ns}
IB => CB	0.596	17.628	0**

Note:

FL = Financial literacy SM = Social media use PP = pay-later promotion

IB = Impulsive buying CB = Compulsive buying

** = $p < 0.01$; ns = not significant

Another hypothesis proposed in this study was to explore whether the interaction among variables or constructs in the model was moderated by gender (hypothesis H5). The data were divided into two groups based on gender: male (110 respondents) and female (256 respondents). Before conducting a multigroup analysis, it was necessary to establish measurement invariance using the MICOM procedure. The first step in MICOM, the configural invariance, is automatically recorded by SmartPLS. Therefore, the researchers only needed to complete the second step of MICOM, i.e., compositional invariance, to justify that the data can be analysed using multigroup analysis (Hair et al., 2018; Henseler et al., 2016).

Table 4 presents the compositional invariance for the male and female groups. Compositional invariance assesses whether the composite scores differ significantly across groups (H0: $c = 1$; H1: $c \neq 1$; where c is the correlation between composite scores). The correlation score of 1 indicates that the two groups have a perfect positive correlation (similar criteria for correlation analysis in general). The null hypothesis will be assessed by

comparing the observed value of c with the lower bound of the confidence interval at the 5% quantile. If the value of the original correlation is higher than or equal to the value of the 5% quantile, the null hypothesis of equal correlation at the 5% level is accepted (Hair et al., 2018; Henseler et al., 2016).

Table 4. *Compositional Invariance*

Construct	c value (=1)	5% quantile	Compositional invariance
Financial Literacy	1	1	Yes
Social Media	0.997	0.978	Yes
Pay-later Promotion	0.913	0.244	Yes
Impulsive Buying	0.998	0.996	Yes
Compulsive Buying	0.996	0.978	Yes

As shown in Table 4, the original correlation values of all constructs were higher than or equal to the value of 5% quantile (see Column c value and 5% quantile). This suggests that the composite was formed similarly across gender groups, providing evidence of compositional invariance. Accordingly, the findings support the feasibility of conducting multigroup analysis between the two gender groups (Hair et al., 2018; Henseler et al., 2016).

After establishing measurement invariance, multigroup analysis was conducted by following the two key stages of PLS-SEM: the evaluation of the outer (measurement) model and the inner (structural) model for both male and female groups. In the next step, the moderation effect was assessed using the PLS-MGA approach. Table 5 shows the outer model assessment for both groups. The reliability and validity tests were satisfactory for both samples, as all indicators met the accepted criteria. Furthermore, the discriminant validity test, as indicated by the HTMT score, also did not exceed 0.9, and the upper bounds of the confidence intervals (97.5%) were less than 1, indicating that each construct was empirically distinct within the model.

Table 5. *Measurement Model for The Gender Moderator*

Construct	Male group			Female group		
	Cronbach's Alpha	Composite Reliability	AVE	Cronbach's Alpha	Composite Reliability	AVE
Financial Literacy	1	1	1	1	1	1
Social Media	0.757	0.843	0.579	0.769	0.848	0.585
Paylater Promotion	0.799	0.846	0.581	0.802	0.867	0.629
Impulsive Buying	0.817	0.88	0.649	0.842	0.894	0.679
Compulsive Buying	0.694	0.807	0.529	0.698	0.799	0.514

After completing the measurement model evaluation, the structural model was assessed by incorporating the PLS-MGA procedure. Table 6 presents the path analysis for both the male and female groups. As shown in Table 6, there was a slightly different result in terms of significant paths between male and female respondents. For the male group, only one path—IB → CB—was statistically significant. In contrast, the female group showed two significant relationships: SM → IB and IB → CB, which were consistent with the results from the complete sample analysis. However, the significant relationships within

each group do not necessarily imply that the differences between groups are statistically significant. It is essential to observe the PLS-MGA to identify whether the differences between groups are statistically significant, which is assessed by examining the p-values of the path coefficient differences (see PLS-MGA column). Thus, the results indicated that none of the path differences between the two groups were statistically significant.

Table 6. *Summary of The Moderating Effect of Gender*

Path relationship	Male group		Female group		PLS-MGA	
	Path coef.	p-values	Path coef.	p-values	Path coef. difference	p-values
FL => IB	-0.011	0.927 ns	-0.001	0.986 ns	0.01	0.525 ns
SM => IB	0.184	0.052 ns	0.168	0.004**	0.016	0.413 ns
PP => IB	0.052	0.064 ns	0.071	0.466 ns	0.134	0.107 ns
IB => CB	0.612	0**	0.598	0**	0.014	0.428 ns

Note:
FL = Financial literacy SM = Social media use PP = Pay-later promotion
IB = Impulsive buying CB = Compulsive buying
** = $p < 0.01$; ns = not significant

Discussion

Impulsive buying, defined as a spontaneous purchase action, is typically examined through psychological factors, such as personality, materialism, self-control, self-consciousness, and hedonic motives (Farid & Ali, 2018; Park & Lennon, 2006; Tarka & Harnish, 2021). This study explores whether non-psychological factors can also explain variations in impulsive buying behaviour.

This study proposed a negative relationship between financial literacy and impulsive buying. The hypothesis is based on the argument that financial literacy plays a key role in financial decision-making (Julaihah, 2021). Purchasing behaviour is one such decision. However, the findings revealed that financial literacy did not significantly affect impulsive buying among the respondents, which leads to the rejection of Hypothesis H1. Several previous studies indicated that the effect of financial literacy on impulsive buying was inconclusive. For example, studies conducted by Anisa, Arifin, Setyowati, Hidayah, & Megasari (2020) and Ayuningtyas & Irawan (2021) confirmed that financial literacy has a negative effect on impulsive buying. Nevertheless, other studies also showed that financial literacy has a positive impact on impulsive purchasing (Triwidisari et al., 2018; Wulandari & Damayanti, 2022), which is contrary to the idea that people with good financial literacy tend to make impulsive buying decisions.

The dissimilar findings between the previous and the present study could be due to differences in the indicators of financial literacy. The present study employed a financial literacy index comprising three dimensions: financial attitude, financial behaviour, and financial knowledge. In contrast, other studies only considered one or two dimensions of financial literacy. Another explanation for the insignificant impact of financial literacy on impulse buying in this study could be attributed to one of the dimensions of financial literacy, specifically financial knowledge, for which many respondents responded to

questions with "I do not know". Moreover, the number of incorrect answers to questions on the financial knowledge dimension is also high (see Figure 2). Although financial literacy did not affect impulsive buying behaviour in this study, it does not diminish the importance of financial literacy in making correct financial or transaction decisions. The literature also suggests that individuals with poor financial management tend to be prone to uncontrollable purchasing behaviours (Anisa et al., 2020; Julaihah, 2021; Potrich & Vieira, 2018).

The PLS-SEM result supported the hypothesis H2, which is also in line with several previous studies (Kazi et al., 2019; Sharif & Yeoh, 2018; She et al., 2021; Triwidisari et al., 2018) that the use of social media can be a driver of impulsive buying. Social media cannot be separated from the youth/students' lives. They are recognised as Generation Z (Gen-Z), known as digital natives and a technology-savvy generation. Unlike digital immigrant groups (Gen X and Boomers), Gen Z has been exposed to the internet since childhood. Their daily activities are often shared using social media, such as Instagram, Facebook, Twitter, etc. In return, their lives are also influenced by those on social media. The findings were also robust in different cultures and different socio-demographics. For instance, She et al. (2021) investigated the effect of excessive use of social media on compulsive buying among young adults in China. They found that social media had a crucial impact on buying disorder phenomena. Similar findings were also exposed by Kazi et al. (2019), who used convenience sampling to survey Pakistanis, students, and employees about the use of social media and impulsive buying. Previous studies in Indonesian literature, such as Triwidisari et al. (2018), also confirmed that social media use could explain students' buying behaviour. Therefore, using social media wisely is predicted to make people less vulnerable to shopping or negative buying behaviour, such as impulsive and compulsive buying.

Impulsive buying is a type of consumer behaviour. In economic literature, consumer behaviour is studied because managers and sellers need to know how and why consumers purchase a particular product (Neal et al., 2004). Knowledge and information about consumer behaviour are crucial for managers to design an effective marketing strategy. In Indonesia, where online shopping is growing fast, one of the prosperous marketing strategies is a pay-later facility. Pay-later is a new payment method introduced by financial technology; it is a payment model of instalments without a credit card (Wulandari & Damayanti, 2022). As pay-later is considered a new phenomenon, the discussion of the research findings also lends literature on credit use or promotion while discussing the effect of pay-later on impulsive buying. In many ways, credit cards used for shopping have similar characteristics to pay-later ones. A study in the Indonesian context conducted by Simanjuntak & Rosifa (2016) found that the use of credit cards significantly and positively influenced compulsive buying.

The pay-later facility is preferable, as the submission or registration process is easier than using a credit card. However, poor self-control and poor financial management would harm their finances, especially students or Gen-Z, who may not have a stable income (Lia & Natswa, 2021). Another study by Wulandari & Damayanti (2022) also found that pay-later mode positively affected impulsive buying receiving the highest regression coefficient compared to other explanatory variables for impulsive buying such as financial literacy and digital financial literacy. Furthermore, Ah Fook & McNeill (2020) confirmed that the pay-later program, as one of the market stimuli, has a close relationship to the impulse buying

of young adult females. However, the current study rejected hypothesis H3, as pay-later did not significantly influence impulsive buying. A study by Omar, Abdul Rahim, Che Wel, & Shah Alam (2014) could shed light on describing this phenomenon. Omar et al. (2014) were interested in investigating the determinants of credit card misuse among working adults in Malaysia. They incorporated self-esteem, materialism, impulsive buying, budget constraint, and compulsive buying to predict the misuse of credit cards. Interesting findings showed that compulsive buying tended to lead to credit card misuse, while impulsive buying was an insignificant factor for credit card misuse. Thus, it provides the idea that instalment payments, such as credit cards and pay-later services, seem closely related to compulsive rather than impulsive buying. The degree of these two types of buying behaviour differs, with compulsive buying being more closely associated with a buying disorder.

This study revealed that impulse buying significantly and positively impacted compulsive buying with a path coefficient of 0.596, explaining 35.6% of the variation in compulsive buying. Thus, hypothesis H4 was accepted. This result aligns with most prior studies on purchasing behaviour (Gogoi & Shillong, 2020; Jung, 2017; Olsen et al., 2022; Pradhan et al., 2018). Impulse buying, indicated by the sudden urge to buy, is closely related to compulsive buying, while impulsive buying could share a positive feeling or subjective well-being in the individual. However, compulsive buying leads to negative effects (Olsen et al., 2022). Compulsivity is a result of continuous impulsivity in purchasing behaviour. Therefore, if consumers are unable to control the stimuli that trigger impulse buying, they will be predicted to experience compulsive buying that could be more harmful than impulse buying (Pradhan et al., 2018). Pradhan et al. (2018) also found that impulsive buying has the strongest effect among other determinants of compulsive buying, followed by materialism and credit card use. Thus, the current study suggests that researchers should include impulsive buying when investigating compulsive buying behaviour.

Based on the PLS-MGA results, the finding did not support hypothesis H5, which ~~is~~ stated that the two groups were considered to have no differences in the relationship proposed in the model. Most previous studies have supported the idea that there are gender differences in consumer behaviour or research on overconsumption. For example, a study by Jung (2017) found that the triggers for impulsive purchasing differed between men and women. If women tend to have a social motive when buying, men's buying behaviour is related to coping motives. The social motives consisted of celebrating, being sociable, and making the gathering more enjoyable, while coping motives included relaxing, forgetting worries, and cheering up when in a bad mood. Similarly, Ek Styvén, Foster, & Wallström (2017) confirmed that women are more likely to make purchases than men. Thus, this could be one plausible reason why many studies on impulsive and compulsive buying were intended to focus on women consumption behaviour (Simanjuntak & Rosifa, 2016). However, this study revealed that men are prone to overconsumption, although their motives may differ (Jung, 2017).

CONCLUSION

There are growing concerns about purchasing behaviour studies among the younger generation. Due to their embrace of the internet and advanced technology and their lack of effective financial management skills, they are vulnerable to overconsumption, which could harm their budget and well-being. This study explored the crucial determinants of buying behaviour among youth in Indonesia. It also found a pattern for financial literacy dimensions similar to those in the 2020 OECD survey. The financial knowledge dimension received the lowest score compared to other dimensions of financial literacy, i.e., financial attitude and financial behaviour. Further, the PLS-SEM analysis revealed that among the predictors of impulsive buying, only the use of social media had a positive and significant effect on impulsive online buying. The findings supported the idea that youth behaviours were highly influenced by social media. Thus, researchers should update the new aspects related to the digital economy or digital transactions when assessing purchasing behaviour. In addition, the practical implication of this finding is suggested to control or limit the use of social media to minimise undesirable effects of excessive social media use. Parents, educators, and academic institutions should campaign and educate on how to use social media wisely. The current study cannot gain a significant impact of financial literacy on buying behaviour. However, the survey response on each financial literacy dimension could shed light on our understanding of the financial literacy phenomenon. Lastly, the research findings found that no gender differences in the proposed research model. Thus, we cannot stick to the argument that women are more vulnerable than men to overconsumption, as men are also prone.

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APPENDIX

Table 7. *Financial Literacy Measurement and Calculation*

Financial literacy dimensions	Score
Financial knowledge	A value of 1 for a correct response and 0 for an incorrect response (maximum scores are 4 for four questions in financial knowledge)
Financial attitude	5-point Likert scale (maximum scores are 20 for four statements in financial attitude)
Financial behaviour	5-point Likert scale (maximum scores are 20 for four statements in financial attitude)
The maximum score for financial literacy is 44	
Formula for calculating financial literacy index: $FL_i = \text{total score achived} \times \frac{100}{\text{maximum score}}$	