

Research Article

The Effects of E-Commerce, Pocket Money, And Financial Literacy on Students' Consumptive Behavior

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Abstract: Consumptive behavior refers to the tendency of individuals to purchase goods or services excessively, driven not by need but by the desire for personal satisfaction. University students are particularly vulnerable to such behavior, especially given the ease of access to e-commerce platforms and limitations in personal financial management. Pocket money received and students' level of financial literacy are key factors shaping their consumption patterns. This study analyzes the effects of e-commerce, pocket money, and financial literacy on the consumptive behavior of undergraduate students in the Development Economics Study Program at Udayana University. A quantitative approach was employed, using a survey of 90 respondents selected through stratified random sampling. Data were analyzed using multiple linear regression. The results show that, jointly, e-commerce, pocket money, and financial literacy significantly affect students' consumptive behavior. Partially, e-commerce and pocket money have positive effects, whereas financial literacy has a negative effect. This indicates that higher financial literacy reduces the tendency toward consumptive behavior.

Keywords: Consumer Behavior; E-commerce; Financial Literacy; Pocket Money; University Students

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1. Introduction

Rapid technological development has transformed societal behavior, which increasingly follows technological innovations to meet needs. The digital era is characterized by various social strata meeting their needs through digital technologies (Dheku & Goa, 2023). New information helps society create future opportunities, including in economic flows. Shifts in global economic flows can influence people's daily behavior (Pradani in Dheku & Goa, 2023).

Significant growth in the internet and technology has given rise to various social media networks. Social media has become not only a necessity but also a lifestyle for the global community (Nesanta et al., 2023), including in buying and selling activities on online sites. Humans cannot be separated from consumption because needs must be met to survive. Over time, needs tend to increase, driven by dissatisfaction and technological developments that facilitate shopping. The convenience offered by online marketplaces encourages purchases driven by wants rather than needs (Septiansari & Handayani, 2021).

Online shopping has its own advantages compared to offline shopping. Consumers are often influenced by special offers and discounts on online shopping platforms, including e-commerce. E-commerce refers to online buying and selling transactions that allow consumers to purchase goods or services without visiting physical stores. This aligns with the nature of e-commerce: enabling sales transactions unconstrained by time and space (Supriyanah & Ayuningsari, 2024).

Globally, the number of e-commerce users continues to rise year by year. In Indonesia, data from the Ministry of Trade of the Republic of Indonesia indicate a significant growth trend from 2020 to 2024. This increase is shown in Table 1, which presents the projected rise in e-commerce users from 38.72 million in 2020 to 65.65 million in 2024.

Table 1. Number of E-Commerce Users in Indonesia (2020-2024).

Year	Users
2020	38.72
2021	44.43
2022	50.89
2023	58.63
2024	65.65

Source: Ministry of Trade of the Republic of Indonesia, 2024

Based on Table 1, the number of e-commerce users in Indonesia increased by more than 50% over the four years from 2020 to 2024. The user base is expected to keep growing each year. In 2020, there were about 38 million users; by 2024, the number is projected to reach 65 million. This continuous growth illustrates a shift in how people conduct buying and selling activities, from traditional to digital/modern methods.

E-commerce users in Indonesia can also be categorized by age group. Figure 1 shows the proportion of e-commerce transactions by age group from 2020 to 2022. The 26–35 age group dominated the proportion of users for three consecutive years, indicating that this segment is the most active in digital transactions, likely due to greater economic independence, stronger digital skills, and relatively higher consumption needs.

The 36–45 age group also shows significant participation. Individuals in this group are generally in their productive years with more stable finances. With stronger purchasing power, they tend to leverage the convenience of digital transactions to meet daily needs.

Meanwhile, the 18–25 age group predominantly university students ranks second in e-commerce transactions. Although their share declined over the three years (from 28.3% in 2020 to 23.3% in 2021 and further in 2022), they remain a relevant segment for study. The decline may stem from economic factors such as dependence on parents, limited income, changing consumption priorities, or the impacts of COVID-19 on economic activity and students' purchasing power.

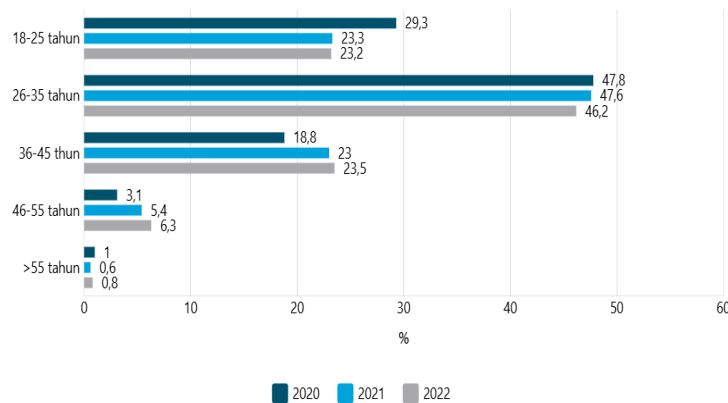


Figure 1. Proportion of the Number of E-Commerce Transactions Based on Age Group.

Source: Kredivo & Katadata Insight Center, 2023

Students are closely connected to technological developments. Academic and social demands encourage them to keep up with current information via social media and digital platforms. This makes students more susceptible to technological trends, including digital consumption habits. It is undeniable that students constitute an attractive target market (Hanipah, 2020). According to Kuroifah (2014), students typically fall within the 18–22 age range—the late adolescent to early adulthood phase—when individuals are still exploring identity, tend to be unstable, and are easily influenced by their environment and the information they receive.

Easy access to information exposes students to a wide variety of products available on apps, making them more prone to wasteful or consumptive purchasing (Fadhilah & Abadi, 2023). Consumptive behavior is the desire to purchase goods that are not actually needed and to do so excessively, merely to gain maximal personal satisfaction (Pratiwi & Yani, 2016).

Setiawan & Australiati Saragih (2022) describe consumptive behavior as wasteful use of goods that prioritizes maximal pleasure, albeit temporary. Mubarokah & Pratiwi (2022) also found that pocket money affects students' consumptive behavior. Wahyudi (2017) defines pocket money as income provided by parents to their children, and its amount can influence spending habits. Generally, higher pocket money is associated with higher consumption. Pocket money may come from parents, relatives, scholarships, or employment (Rikayanti & Listiadi, 2020).

Pocket money also supports the development of responsibility. It serves as a learning medium for adolescents or university students to manage finances appropriately, as it is given daily, weekly, or monthly, enabling them to pay for things they consider essential (Rozaini & Sitohang, 2020).

In addition to pocket money, financial literacy influences consumptive behavior (Mubarokah & Pratiwi, 2022). Financial literacy is the capacity or understanding to handle and manage personal finances (Zulfaldi & Sulhan, 2023). Financial literacy skills enable individuals to make informed money decisions and minimize the risk of being misled in economic matters. The higher the level of financial knowledge, the better the management of one's endeavors (Haekal, 2021).

Nurulhilmia et al. (2024) found that financial literacy significantly affects students' consumptive behavior, implying that higher financial literacy reduces consumptiveness. By contrast, Fadhilah & Abadi (2023) reported a negative but non-significant effect, suggesting that higher financial literacy does not guarantee non-consumptive behavior. Ramadhani (2019) noted that students often treat financial literacy merely as knowledge, which does not necessarily increase literacy levels.

Students' consumptive patterns are worth investigating in relation to e-commerce. This research examines the spending habits of students in the Development Economics Study Program (PSSEP) at Udayana University. PSSEP was chosen because its location, situated amid entertainment hubs and tourism areas in Bali, is assumed to encourage consumptive behavior. Although large metropolitan areas like Jakarta present similar contexts, this study highlights that consumptive patterns are also significant in large, non-metropolitan urban areas such as Bali. Accordingly, PSSEP students are considered representative for analyzing the influence of e-commerce, pocket money, and financial literacy on consumptive behavior in a tourism-dominated region.

2. Method

This study uses a quantitative approach to measure inter-variable effects objectively based on numerical data and statistical analysis. This approach was chosen because it yields measurable and generalizable results. According to Sugiyono (2023), quantitative methods are grounded in positivism and are used to study specific populations or samples, using research instruments and statistical analysis to test hypotheses. Here, the quantitative approach tests the effects of e-commerce, pocket money, and financial literacy on the consumptive behavior of PSSEP students at Udayana University, enabling an empirical, scientific account of inter-variable relationships (Sugiyono, 2023).

This investigation was carried out at the Faculty of Economics and Business (FEB), Udayana University, encompassing its facilities at both the Sudirman Campus (in Denpasar) and the Bukit Jimbaran Campus (in Badung Regency). The total population for this research was 815 students enrolled in the PSSEP (Development Economics Study Program) across the 2021, 2022, and 2023 intake cohorts. A target sample size of 90 respondents was determined through the application of the Slovin formula, establishing an acceptable margin of error at 10%. Furthermore, stratified random sampling was utilized as the selection technique to guarantee appropriate representation across each respective student cohort. Data collection involved observation and a five-point Likert-scale questionnaire. Instrument validity and reliability tests ensured accuracy and consistency. Primary data were obtained from the questionnaire; secondary data included supporting information such as student numbers and e-commerce user data in Indonesia (Sugiyono, 2023).

The data analysis employed descriptive statistics to characterize the data and multiple linear regression to test the influence of *e-commerce*, pocket money, and financial literacy on students' consumptive behavior. Classical assumption tests were conducted before hypothesis testing to ensure the validity of the statistical model. These specific checks included testing for normality, multicollinearity, and heteroskedasticity. Hypotheses were tested jointly using the F-test and partially using the t-test at a 5% level of significance. The objective of this analysis was to show the direction and magnitude of the influence of each independent variable on students' consumptive behavior, thereby providing empirical insights into the driving factors of student consumption in the digital era. (Wooldridge, 2019; Sugiyono, 2023).

3. Results And Discussion

Analysis Results of Research Data

Descriptive Analysis Results

The data summarization process in this research utilized descriptive statistics to ascertain central tendency and dispersion, specifically by documenting the minimum, maximum, mean, and standard deviation for the variables related to the impact of *e-*

commerce, pocket money, and financial literacy on their consumptive behavior. The data used for this descriptive evaluation was also confirmed to be normally distributed. The resulting statistical metrics are documented in Table 2.

Table 2. Descriptive Analysis Results.

	N	MINIMUM	MAXIMUM	MEAN	Standard Deviation
Con	90	2.92	5.00	3.7261	.51435
E-Com	90	3.00	5.00	4.0361	.50879
Money	90	1	5	3.06	1.105
Flit	90	2.50	5.00	3,9069	.59509

Source: Processed data, 2025

Table 2 presents descriptive statistics for the study variables. Means are based on average item scores per variable (N = 90), using a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

The Consumptive Behavior variable has a minimum of 2.92 and a maximum of 5.00, with a mean of 3.7261. The SD of 0.51435 indicates that average responses deviate by about ± 0.51 points from the mean, suggesting that respondents tend to agree and that responses are relatively homogeneous around the mean.

For E-commerce, the minimum is 3.00 and the maximum is 5.00. This variable has the highest mean (4.0361). The SD of 0.50879 indicates deviations of about ± 0.51 points, showing respondents generally agree/strongly agree, and that perceptions are relatively homogeneous.

Financial Literacy has a minimum of 2.50 and a maximum of 5.00, with a mean of 3.9069. The SD of 0.59509 suggests deviations of about ± 0.60 points, indicating generally “agree” responses with slightly greater variability than for E-commerce and Consumptive Behavior.

Pocket Money ranges from 1 to 5, with a mean of 3.06 and a relatively high SD of 1.105. As Pocket Money is not a Likert-scale construct, the higher SD indicates substantial variation in the amount of pocket money among respondents.

Multiple Linear Regression Analysis

Multiple linear regression was used to assess the effects of the independent variables e-commerce (E-Com), financial literacy (F-lit), and pocket money (Money) on the dependent variable, consumptive behavior (Con). Data were processed using SPSS for Windows 22. Results appear in Table 3.

Table 3. Results of Multiple Linear Regression Analysis.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1 (Constant)	1,731	.367		4,720	.000
E-Com	.523	.083	.518	6,321	.000
Money	.206	.037	.442	5,614	.000
Flit	-.188	.073	-.218	-2,589	.011

Source: Processed data, 2025

Based on the analysis results in Table 3, the following regression model equation was obtained.

$$\begin{aligned}
 Y &= 1.731 + 0.523 \text{ E-com} + 0.206 \text{ Money} - 0.188 \text{ Flit} \\
 \text{Std. Error} &= (0.367) (0.083) (0.037) (0.073) \\
 t_{hitung} &= (4.720) (6.321) (5.614) (-2.589) \\
 \text{Sig.t} &= (0.000) (0.000) (0.000) (0.011) \\
 \text{R Square} &= 0.520 \\
 f_{hitung} &= 31,049 \\
 \text{Sig F} &= 0.000
 \end{aligned}$$

Classical Assumption Test

Some requirements need to be met to perform multiple linear regression analysis, which is the Classical Assumption Test. The Classical Assumption Test consists of several tests, namely the normality test, the multicollinearity test, and the heteroscedasticity test. The results of these tests can be presented as follows.

a. Normality test

The normality test is conducted to test whether the residuals of the regression model created are normally distributed or not. If they have a normal or near-normal distribution, the regression model can be considered good. The fulfillment or non-fulfillment of the normality test can be determined by performing the statistical Kolmogorov-Smirnov (K-S) test, which can be seen in Table 4.

Table 4. Normality Test Results.

		Unstandardized Residual
N		90
Normal	Mean	.000000
Most Extreme Differences	Standard Deviation	.35636845
	Absolute	.053
Test Statistics	Positive	.040
	Negative	-.053
Asymp. Sig. (2-tailed)		.200 ^{c,d}

Source: Processed data, 2025

The Kolmogorov-Smirnov (KS) statistic was calculated as 0.053, resulting in an Asymp. Sig. (2-tailed) value of 0.200. Since this significance value 0.200 is greater than the 5% significance level ($\alpha = 0.05$), the results confirm that the data are normally distributed.

b. Multicollinearity Test

The multicollinearity test is performed to examine whether the regression model has a correlation among its independent variables. This test of the independent variables can be assessed from the Tolerance value or the Variance Inflation Factor (VIF) value. VIF is a factor that measures how much the variance of the regression estimator coefficient increases compared to orthogonal independent variables when they are linearly related. As a benchmark, a model is considered free from multicollinearity if its Tolerance value is greater than 10 percent (0.10) or its VIF is less than 10.. The complete results of the multicollinearity test are displayed in Table 5.

Table 5. Multicollinearity Test Results.

		Collinearity Statistics	
Model		Tolerance	VIF
1	E-com	.832	1,201
	Money	.899	1,112
	F-Lit	.788	1,269

Source: Processed data, 2025

Table 5 shows that the model is free from multicollinearity. This can be seen as each independent variable has a Tolerance value greater than 10 percent and a VIF value less than 10.

c. Heteroscedasticity Test

The heteroscedasticity test is performed to determine the inequality of residual variances across all observations in a regression model. A good regression model is homoscedastic, meaning residuals have constant and/or equal variances. The test is performed using the Glejser method. If the probability value is >0.05 , the residuals have a constant variance. Conversely, if the probability value is ≤ 0.05 , the residuals have a non-constant variance.

Table 6. Heteroscedasticity Test Results.

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	.225	.217			1,035	.304
E-Com	.096	.049	.225		1960	.053
Money	-.013	.022	-.065		-.586	.560
F-Lit	-.075	.043	-.206		-1,740	.085

Source: Processed data, 2025

The findings in Table 6 confirm that the heteroscedasticity assumption is not violated, as the significance (Sig.) value for every independent variable exceeds the 0.05 threshold.

Coefficient of Determination Test

The coefficient of determination (R^2) essentially measures how well the model explains the variation in the dependent variable. The value of R^2 ranges from zero to one. A low R^2 value indicates that the independent variables have a limited ability to explain the variation in the dependent variable. Conversely, a higher R^2 value signifies a greater proportion of the variability in the dependent variable that the independent variables in the model can explain.

Table 7. Results of the Determination Coefficient Test.

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.721 ^a	.520	.503	.36253

Source: Processed data, 2025

The analysis summarized in Table 7 reveals that the coefficient of determination (R^2) stands at 0.520. This figure indicates that the combined influence of e-commerce, pocket money, and financial literacy explains 52 percent of the variability in student consumer behavior. Conversely, the residual 48 percent of the variance is attributed to external variables or factors not incorporated into this specific regression model.

Simultaneous Regression Coefficient Significance Test (F Test)

To assess the simultaneous effect, an F-test was performed. This test aimed to evaluate the combined influence of e-commerce, pocket money, and financial literacy on student consumer behavior. The results of the analysis are presented as follows.

Table 8. Results of the F Test (ANOVA Test).

Model	Sum of Squares	df	Mean	F	Sig.
1 Regression	12,242	3	4,081	31,049	.000 ^b
Residual	11,303	86	.131		
Total	23,545	89			

Source: Processed data, 2025

- 1) Hypothesis formula, meaning that E-commerce, Pocket Money, and Financial Literacy do not have a simultaneous effect on the consumer behavior of PSSEP students at Udayana University. $H_0: \beta_1 = \beta_2 = \beta_3 = 0$

H_1 At least one of them, E-commerce (E-Com), Pocket Money (Money), and Financial Literacy (F-Lit), has a significant influence on the consumer behavior of PSSEP Udayana University students. $\beta_i \neq 0 (i = 1,2,3)$

- 2) Real Level

The actual level used $\alpha = 0,05$ (5%)

- 3) Determine the testing criteria

H_0 accepted if $F_{hitung} \leq F_{tabel}$

H_0 rejected if $F_{hitung} > F_{tabel}$

- 4) Calculating test statistics

Based on the analysis results, the calculated F value is 31.049 and the Sig. F value is <0.001.

- 5) Conclusion

Based on the calculation results, the F-statistic value obtained is 31.049 with a significance level (Sig. F) of 0.001, which is less than $\alpha = 5\%$ (0.05). Therefore, H_0 is rejected and H_1 is accepted. This indicates that e-commerce, pocket money, and financial literacy simultaneously have a significant effect on students' consumptive behavior. This finding is supported by the coefficient of determination (R^2) value of 0.520, indicating that 52% of the variation in students' consumptive behavior is explained by e-commerce, pocket money, and financial literacy. In comparison, the remaining 48% is attributed to other factors not included in the model.

Partial Hypothesis Test (t-Test)

A partial regression coefficient analysis (t-test) was conducted to examine the significance of the independent variables e-commerce, pocket money, and financial literacy on the dependent variable, namely student consumer behavior. The results of this t-test are presented in Table 9.

Table 9. t-Test Results.

Variables	B	T	Sig.
(Constant)	1,731	4,720	.000
E-Com	.523	6,321	.000
Money	.206	5,614	.000
F-Lit	-.188	-2,589	.011

Source: Processed data, 2025

1. The influence of e-commerce (E-Com) on consumer behavior (Con)

a. Formulating a hypothesis

$H_0: \beta_1 \leq 0$, meaning that e-commerce has no influence on the consumer behavior of PSSEP Udayana University students.

$H_1: \beta_1 > 0$, meaning that e-commerce partially has a positive and significant influence on the consumer behavior of PSSEP Udayana University students.

b. Real Level

By using significance (α) = 0.05 (5%) or with a confidence level of 95%, then $df = (nk)$

c. Determine the testing criteria

H_0 accepted if $t_{hitung} \leq t_{tabel}$

H_0 rejected if $t_{hitung} > t_{tabel}$

d. Statistical Calculation

Based on the data analysis using SPSS, the calculated t-value for the e-commerce variable is 6.321, with a significance value (Sig.) of 0.000

e. Conclusion

Based on the t-test results in Table 9, the calculated t-value was 6.321 with a significance level of $0.000 < 0.05$, thus concluding that H_0 is rejected and H_1 is accepted. This means that the e-commerce variable partially has a significant effect on student consumer behavior.

The regression coefficient value of 0.523 indicates a positive relationship, meaning that every 1-unit increase in the e-commerce variable will increase student consumer behavior by 0.523 units, assuming other variables are held constant. Therefore, the higher the intensity of e-commerce use by students, the greater their tendency to engage in consumer behavior.

2. The influence of pocket money (Money) on consumer behavior (Con)

a. Formulating a hypothesis

$H_0: \beta_2 \leq 0$ This means that pocket money does not partially influence the consumer behavior of PSSEP Udayana University students.

$H_1: \beta_2 > 0$, meaning that pocket money partially has a positive and significant effect on the consumer behavior of PSSEP Udayana University students.

b. Real Level

By using significance (α) = 0.05 (5%) or with a confidence level of 95%, then $df = (nk)$

c. Determine the testing criteria

H_0 accepted if $t_{hitung} \leq t_{tabel}$

H_0 rejected if $t_{hitung} > t_{tabel}$

d. Statistical Calculation

Based on the data analysis using SPSS, the calculated t-value for the pocket money variable is 5.614, with a significance value (Sig.) of 0.000

e. Conclusion

Based on the t-test results shown in Table 9, the calculated t-value of 5.614 with a significance level of $0.000 < 0.05$ indicates that H_0 is rejected and H_1 is accepted. This finding demonstrates that the pocket money variable has a partially significant effect on students' consumptive behavior. The regression coefficient of 0.206 signifies a positive relationship, meaning that for every one-unit increase in

pocket money, students' consumptive behavior rises by 0.206 units. In other words, the more pocket money students receive, the greater their tendency to engage in consumptive spending.

3. The influence of financial literacy (F-lit) on consumer behavior (Con)

a. Formulating a hypothesis

$H_0: \beta_3 \geq 0$ This means that financial literacy partially does not influence the consumer behavior of PSSEP Udayana University students.

$H_1: \beta_3 < 0$, meaning that financial literacy partially has a negative and significant effect on the consumer behavior of PSSEP Udayana University students.

b. Real Level

By using significance (α) = 0.05 (5%) or with a confidence level of 95%, then $df = (nk)$

c. Determine the testing criteria

H_0 accepted if $t_{hitung} \geq t_{tabel}$

H_0 rejected if $t_{hitung} < t_{tabel}$

d. Statistical Calculation

Based on the SPSS analysis results, the calculated t-value for the financial literacy variable is -2.589 , with a significance value (Sig.) of 0.011 .

e. Conclusion

Based on the t-test results presented in Table 9, the calculated t-value of -2.589 with a significance level of $0.011 < 0.05$ indicates that H_0 is rejected and H_1 is accepted. This finding confirms that the financial literacy variable has a partially significant effect on students' consumptive behavior. The regression coefficient of -0.282 reflects a negative relationship, meaning that for every one-unit increase in financial literacy, students' consumptive behavior decreases by 0.282 units. In other words, the higher the students' financial literacy level, the lower their inclination to exhibit consumptive tendencies.

Discussion of Research Results

The Simultaneous Influence of E-Commerce, Pocket Money, and Financial Literacy on the Consumptive Behavior of Students in the Undergraduate Program in Development Economics (PSSEP) at Udayana University.

Based on the results of the multiple linear regression analysis conducted, it is found that the variables of e-commerce, pocket money, and financial literacy simultaneously have a significant effect on the consumptive behavior of students in the Undergraduate Program of Development Economics (PSSEP) at Udayana University. This is indicated by the results of the F test, where the calculated F value is greater than the F table and the significance value is less than 0.05 . Thus, the three independent variables (e-commerce, pocket money, and financial literacy) in this study together can explain variations in the consumptive behavior of PSSEP Udayana University students.

Partially, the e-commerce variable has a positive and significant effect on student consumer behavior. This means that the higher the intensity of e-commerce use, the higher the tendency of students to consume, including impulsive consumption. The ease of transactions, various promotions, and accessibility of online shopping encourage the formation of consumer habits in students. Furthermore, the pocket money variable has also been shown to have a positive and significant effect on student consumer behavior. The more pocket money students receive, the higher their purchasing power, which

encourages them to increase spending on both basic and secondary needs. Conversely, the financial literacy variable has a negative and significant effect on student consumer behavior. This means that the higher the financial literacy of students, the lower their level of consumer behavior, because students are better able to control themselves, prioritize, and distinguish between needs and wants.

The findings of this study align with behaviorism theory, which emphasizes the stimulus-response relationship. In this case, e-commerce and pocket money act as external stimuli that drive student consumer behavior. Repeated purchases that result in immediate gratification reinforce these consumer habits. However, financial literacy serves as a form of cognitive control that can restrain impulsive responses, thereby suppressing consumer behavior. Meanwhile, from a consumer behavior perspective, this study demonstrates that student purchasing decisions are influenced by a combination of economic factors (pocket money), technological factors (e-commerce), and psychological factors (financial literacy). Thus, student consumer behavior is not solely driven by rational needs but also influenced by convenience, lifestyle, and the individual's ability to manage their financial resources.

The Influence of E-Commerce on the Consumptive Behavior of Students in the Undergraduate Program in Development Economics (PSSEP) at Udayana University

The results of this study indicate that e-commerce has a significant and partial positive effect on student consumer behavior. This means that the more students use e-commerce, the higher their tendency to engage in consumer behavior.

The results of this study are supported by research. Fitria & Desiyanti, 2023 This suggests that factors influence students' impulsive behavior in purchasing products they don't actually need because they feel comfortable and accustomed to the convenience available on e-commerce, which triggers consumer behavior in students. Other research Mubarakah & Pratiwi, 2022 Stated that e-commerce has a significant and positive influence on student consumer behavior. High e-commerce site usage leads to increased consumer behavior among students. Conversely, low e-commerce usage leads to fewer students engaging in consumer behavior. This research finding is also supported by research from (Oskar et al., 2022) And (Febriyanti et al., 2024) This states that e-commerce partially has a positive influence on consumer behavior.

The results of this study indicate that e-commerce partially has a positive and significant effect on student consumer behavior. This finding can be explained through behaviorism theory, which emphasizes the stimulus-response relationship. In this case, the stimulus consists of promotions, discounts, product recommendations, and ease of access offered by e-commerce. These stimuli elicit student responses in the form of purchasing decisions, often impulsive. This response is reinforced by positive experiences, such as easy transactions, fast delivery, and shipping bonuses, which further shape and repeat consumer behavior. This indicates that student consumer behavior is the result of a reinforcement process, consistent with behaviorism theory.

Furthermore, the research findings can be explained through consumer behavior theory, which highlights how individuals make resource-use decisions to meet their needs and desires. This research demonstrates that students' purchasing decisions are not solely based on rational needs but are also influenced by psychological, social, and situational factors. Psychological factors are reflected in impulsive impulses upon discovering promotions, social factors are seen through the influence of trends and consumer lifestyles, and situational factors are evident in the convenience offered by e-commerce. Thus, the research findings reinforce consumer behavior theory, where students' purchasing behavior is no longer oriented toward basic needs but rather

toward convenience, habits, and hedonic impulses triggered by the presence of e-commerce.

The Influence of Pocket Money on the Consumptive Behavior of Students in the Undergraduate Program in Development Economics (PSSEP) at Udayana University.

The findings of this study demonstrate that pocket money has a partial and significant positive effect on students' consumer behavior. This implies that the greater the amount of pocket money received by students, the higher their tendency to increase spending both on essential and non-essential needs. These results are consistent with previous studies by Ramadani et al. (2024) and Rismayanti & Oktapiani (2020), which confirmed that pocket money exerts a positive and significant influence on consumer behavior. Similarly, Kumalasari & Soesilo (2019) noted that students often mismanage their allowances; when they perceive their monthly funds as insufficient, they tend to request additional money to meet their expenses. Hidayah & Bowo (2018) further emphasized that an increase in pocket money typically leads to a rise in consumer behavior, while a decrease in pocket money results in reduced consumption levels.

This study reinforces the finding that pocket money partially and significantly affects students' consumer behavior in a positive direction. In essence, the more financial resources students possess, the greater their inclination to engage in consumption—covering both basic and secondary needs. This phenomenon can be explained through behavioral theory (behaviorism), which posits that pocket money serves as a stimulus that triggers a behavioral response. The availability of financial resources encourages consumption activities, such as purchasing non-essential goods or indulging in impulsive buying. Over time, this repetitive behavior is reinforced by the temporary satisfaction (reinforcement) students experience after fulfilling their desires through spending. Consequently, pocket money acts as an external factor that stimulates and sustains consumption patterns, which tend to increase in intensity as students receive more funds.

Moreover, these findings are aligned with consumer behavior theory, which asserts that individual decisions in managing financial resources—such as pocket money—are influenced by both rational considerations and emotional impulses. Students who receive higher allowances generally have greater flexibility in allocating their spending, enabling them to fulfill not only their essential needs but also secondary and even hedonic desires. This indicates that students' consumption behavior is shaped not merely by practical necessities but also by psychological motives for satisfaction, social influence from peers, and lifestyle dynamics. Therefore, as the amount of pocket money increases, students are more likely to broaden their consumption patterns and adopt more consumptive behaviors, consistent with the principles of consumer behavior theory.

The Influence of Financial Literacy on the Consumptive Behavior of Students in the Undergraduate Program in Development Economics (PSSEP) at Udayana University

The findings of this study reveal that financial literacy exerts a partial yet significant negative influence on students' consumer behavior. In other words, as students' financial literacy levels increase, their propensity to engage in excessive or impulsive consumption decreases. These findings are consistent with previous studies by Mubarokah & Pratiwi (2022) and Oskar et al. (2022), both of which found that financial literacy has a negative and significant effect on consumer behavior. Similarly, Ramadhani (2019) discovered that the relationship between financial literacy and consumer behavior tends to be inconsistent; an increase in financial literacy does not

necessarily lead to a change in consumer habits. Meanwhile, Kumalasari & Soesilo (2019) emphasized that financial literacy influences decision-making processes, including those related to consumption activities.

This study further supports the idea that financial literacy has a negative and significant effect on students' consumer behavior. A higher level of financial literacy equips students with greater awareness and control over their financial decisions, thereby reducing their likelihood of engaging in impulsive consumption. From the perspective of behavioral theory (behaviorism), financial literacy acts as a cognitive control mechanism that shapes individuals' responses to external stimuli—such as promotions, discounts, or the convenience of online shopping. Students who possess stronger financial literacy skills are better at exercising self-control, distinguishing between needs and wants, and resisting impulsive tendencies. Consequently, elevated consumer behavior is often a reflection not only of external influences but also of limited self-regulation stemming from low financial literacy.

Moreover, these findings are in line with consumer behavior theory, which posits that purchasing decisions are influenced by knowledge, experience, and resource management abilities. Students with a solid understanding of financial literacy tend to allocate their finances more prudently, prioritize essential needs, and avoid irrational spending. On the other hand, those with limited financial literacy are more susceptible to emotional, psychological, and social pressures—such as the desire for social recognition or conformity to trends—that drive consumerism. Hence, financial literacy serves as a fundamental determinant in shaping students' consumption patterns. The higher an individual's financial literacy, the stronger their capacity to manage and control their consumer behavior effectively.

4. Conclusion

E-commerce, pocket money, and financial literacy collectively have a significant influence on the consumer behavior of students in the Undergraduate Development Economics Study Program (PSSEP) at Udayana University. Partially, e-commerce and pocket money have a positive and significant influence on consumer behavior, while financial literacy has a negative and significant impact, indicating that the higher the financial literacy of students, the lower their tendency to engage in consumer behavior..

LIST OF REFERENCES

- Al'asqolaini, MZ, & Rohmah, A. (2018). Consumer Behavior and Its Influence on INK Helmet Purchasing Decisions among Management Students at STIENU Trate Gresik. *Journal of Economics and Entrepreneurship*, 1. <http://journal.stienugresik.ac.id/index.php/jek/article/view/10>
- Alfiyansyah, MA, Alamsyah, S., & Tanjung, H. (2024). The Influence of E-Commerce, Financial Literacy, and Digital Literacy on Student Consumptive Behavior. *Journal of Revenue Accounting Journal*, 5(1), 972–979.
- Amaliyah, R., & Witiastuti, RS (2015). Analysis of Factors Influencing the Level of Financial Literacy Among MSMEs in Tegal City. *Management Analysis Journal*, 4(3), 252–257. <https://doi.org/10.15294/maj.v4i3.8876>
- Anggraini, RT, & Santhoso, FH (2017). The Relationship between Hedonistic Lifestyle and Consumer Behavior in Adolescents. *Gadjah Mada Journal of Psychology (GamaJoP)*, 3, 131–140. <https://doi.org/10.22146/gamajop.44104>
- Ardiansyah, AF, Rauf, A., & Nurman, N. (2022). The Influence of Financial Literacy on Financial Management of MSMEs in Makassar City. *Sinomika Journal*, 1(4), 879–890.
- Armelia, Y., & Irianto, A. (2021). The Influence of Pocket Money and Lifestyle on College Students' Consumptive Behavior. *Ecogen Journal*, 4(3), 418–426. <https://doi.org/10.24036/jmpe.v4i3.11509>

- Bahari, A.F., & Ashoer, M. (2018). Cultural, Social, Personal, and Psychological Influences on Ecotourism Consumer Purchasing Decisions. *Journal of Management, Ideas, and Inspiration (MINDS)*, 5(1), 69–78. <https://journal.uin-alauddin.ac.id/index.php/minds/article/view/4839/4430>
- Calvin. (2021). THE EFFECT OF E-COMMERCE IMPLEMENTATION AND SERVICE QUALITY ON CUSTOMER SATISFACTION AT PT INDOLAND BATAM. Putera Batam University.
- Capuano, A., & Ramsay, I. (2010). What Causes Suboptimal Financial Behavior? An Exploration of Financial Literacy, Social Influences and Behavioral Economics. 18.
- Dewi, N., Rusdarti, R., & Sunarto, S. (2017). The Influence of Family Environment, Peers, Self-Control, and Financial Literacy on College Students' Consumptive Behavior. *Journal of Economic Education*, 6(1), 29–35. <http://journal.unnes.ac.id/sju/index.php/jeeec>
- Dheku, ME, & Goa, L. (2023). The Influence of Online Shops on Lazada E-Commerce on the Consumptive Behavior of Pastoral Students at the Paulus Dormitory. In *Theos: Journal of Education and Theology*, 3(12), 322–329. <https://doi.org/10.56393/intheos.v3i12.1938>
- Dikria, O., & Mintarti, SU (2016). THE EFFECT OF FINANCIAL LITERACY AND SELF-CONTROL ON CONSUMER BEHAVIOR OF STUDENTS DEPARTMENT OF DEVELOPMENT ECONOMICS, FACULTY OF ECONOMICS, STATE UNIVERSITY OF MALANG, CLASS 2013. *Journal of Economic Education*, 09(2), 128–139. <https://doi.org/10.17977/UM014v09i22016p128>
- Dilasari, D., Mulyati, S., & Kurniawan, A. (2021). The Influence of Financial Literacy, Lifestyle, Locus of Control, and Demographics on the Consumptive Behavior of the Millennial Generation in Subang City. *JASS (Journal of Accounting for Sustainable Society)*, 2(02), 56–77. <https://doi.org/10.35310/jass.v2i02.671>
- Elnino, SR, Lesawengen, L., & Lasut, JJ (2020). Consumptive Actions in Online Shopping Activities of Students at the Faculty of Social and Political Sciences, Sam Ratulangi University, Manado. *Holistic Journal*, 13(3).
- Fadhilah, N., & Abadi, MT (2023). The Influence of Online Shopping Application Use, Lifestyle, and Financial Literacy on College Students' Consumptive Behavior. *Journal of Business & Applied Management*, 16(2), 141–156. <https://doi.org/10.30813/jbam.v16i2.4293>
- Febriyanti, R., Ariwibowo, P., & Nurmalsari F, D. (2024). The Influence of E-Commerce and Digital Payment on Student Consumptive Behavior at Sman 11 Depok. *Economics Learning Experience & Social Thinking Education Journal*, 3(2), 123–130. <https://doi.org/10.58890/eleste.v3i2.173>
- Fitria, R., & Desiyanti, R. (2023). The Influence of E-Commerce, Pocket Money, Self-Control and Financial Literacy on Student Consumptive Behavior After the Covid 19 Pandemic (Case study on Bung Hatta University Students, Class of 2021-. 19, 1–20.
- Fitriyani, N., Widodo, PB, & Fauziah, N. (2013). THE RELATIONSHIP BETWEEN CONFORMITY AND CONSUMER BEHAVIOR AMONG STUDENTS IN GENUK INDAH SEMARANG. *Undip Psychology Journal*, 12(1), 55–68.
- Fitriyani. (2024). The Relationship Between Self-Control and the Tendency to Social Media Addiction in Students at State Senior High School 2 Tembilahan.
- Ghozali, I. (2021). APPLICATION OF MULTIVARIATE ANALYSIS WITH IBM SPSS 26 (10th ed.). Diponegoro University Publishing Agency.
- Haekal, F. (2021). The Influence of Financial Literacy on MSME Financial Management in Palopo City. Faculty of Economics and Business, Muhammadiyah University of Palopo.
- Hanipah. (2020). THE INFLUENCE OF ECONOMIC LITERACY AND LIFESTYLE ON CONSUMER BEHAVIOR FOR FASHION PRODUCTS FROM A SHARIA ECONOMIC PERSPECTIVE (A STUDY OF SHARIA ECONOMICS STUDENTS OF THE FACULTY OF ECONOMICS AND ISLAMIC BUSINESS, UIN AR-RANIRY). Ar-Raniry State Islamic University.
- Harapan, D.A., & Amanah, D. (2018). Online Shopping Behavior in Indonesia: A Case Study. *JRMSI - Indonesian Journal of Management Science Research*, 9(2), 193–213. <https://doi.org/10.21009/jrmsi.009.2.02>
- Hariyanti, & Artiyany, M. (2020). Financial Literacy Level of Students and Factors Influencing It at Tri Dharma Nusantara Makassar College of Economics. *Al-Buhuts*, 16(2), 91–110.

- Harlina. (2021). SELF-CONTROL OF MIGRANT STUDENTS IN MAINTAINING THE TRUST OF THEIR PARENTS (CASE STUDY OF STUDENTS OF THE FACULTY OF USHULUDDIN ADAB AND DAKWAH IAIN PAREPARE).
- Hidayah, N., & Bowo, PA (2018). The Influence of Pocket Money, Locus of Control, and Peer Environment on Consumptive Behavior. *Economic Education Analysis Journal*, 7(3), 1025–1039. <https://doi.org/10.15294/eeaj.v7i3.28337>
- Kartini, T., & Mashudi, U. (2022). Financial Literacy of Boarding Students, Prospective Economics Educators at the Faculty of Teacher Training and Education, University of Jember. *PROMOSI (Journal of Economic Education)*, 10(2), 154–164. <https://doi.org/10.24127/pro.v10i2.6648>
- Kasmi, K., & Candra, AN (2017). Implementation of Business-to-Consumer E-Commerce to Increase Sales of Pringsewu's Typical Snack Products. *Jurnal Aktual STIE Trisna Negara*, 15(2), 109–116. <https://doi.org/10.47232/aktual.v15i2.27>
- Kredivo, & Center, KI (2023). Indonesia Consumer Behavior Report 2023: Economic Recovery and Post-Pandemic Shopping Trends. <https://kredivocorp.com/wp-content/uploads/2023/06/2023-Indonesia-e-Commerce-Behavior-Report.pdf>
- Kriizbayani. (2023). The Influence of Shopee E-commerce and Pocket Money on the Consumptive Behavior of FEBI UIN Mataram Students Class of 2020-2022. State Islamic University of Mataram.
- Kumalasari, D., & Soesilo, YH (2019). The Influence of Financial Literacy, Individual Modernity, Pocket Money, and Self-Control on the Consumptive Behavior of Undergraduate Students of Economics Education, Class of 2016, Faculty of Economics, State University of Malang. *Journal of Economic Education*, 12(1), 61–71. <http://journal2.um.ac.id/index.php/jpe/index>
- Kuroifah, M. (2014). The Influence of the Appeal of Instant Food Advertisements on Television on Food Consumption Behavior of Boarding House Students of the Culinary Engineering Education Study Program, Faculty of Engineering, Yogyakarta State University. In Yogyakarta State University.
- Mankiw, N.G. (2018). *Principles of Economics* (8 Edition). Cengage Learning.
- Mu'amala, R., & Wahjudi, E. (2021). The Role of Financial Literacy in Mediating the Effect of Self-Control on the Consumptive Behavior of Student E-Commerce Users. *E-Journal of Economics and Business*, Udayana University, 10(10), 883–896. <https://doi.org/10.24843/eeb.2021.v10.i10.p06>
- Mubarakah, MS, & Pratiwi, V. (2022). The Influence of E-Commerce, Pocket Money, and Financial Literacy on Student Consumptive Behavior During the Covid-19 Pandemic. *E-Journal of Economics and Business*, Udayana University, 11(04), 496–509. <https://doi.org/10.24843/eeb.2022.v11.i04.p10>
- Munazzah, Z. (2016). THE RELATIONSHIP BETWEEN SELF-CONTROL AND CONSUMER BEHAVIOR AMONG S1 STUDENTS OF SYARIAH BANKING, UIN MAULANA MALIK IBRAHIM MALANG. Maulana Malik Ibrahim State Islamic University of Malang.
- Nesanta, KEC, Sukawati, TGR, & Ekawati, NW (2023). The Role of Brand Image in Mediating Price and Service Quality on Purchasing Decisions on TikTok Shop. *E-Journal of Economics and Business*, Udayana University, 12(12), 2385–2396. <https://doi.org/10.24843/eeb.2023.v12.i12.p07>
- Nurulhilmia, S., Mulyadi, D., & Sandi, SPH (2024). The Impact of Financial Literacy and Allowance on the Consumptive Behavior of Cosplayers in Greater Jakarta. *Costing: Journal of Economic, Business and Accounting*, 7, 3622–3627.
- OCBC NISP. (2024). Student Pocket Money Amount, Influencing Factors, and How to Manage It. OCBC NISP. <https://www.ocbc.id/id/article/2024/11/22/uang-saku-ideal-untuk-mahasiswa>
- Oskar, DP, Prinoya, RW, Novita, W., & Johan, H. (2022). E-Commerce, Financial Literacy, and Lifestyle on Online Shopping Consumptive Behavior via the TikTok Platform. *Jurnal Ekobistek*, 11, 442–447. <https://doi.org/10.35134/ekobistek.v11i4.434>
- Pelengkahu, R.M., Tumbuan, W.J.F., & Roring, F. (2023). The Influence of Promotion, Physical Evidence, and Digital Marketing Prices on Purchasing Decisions on Shopee E-Commerce in Manado City. *EMBA Journal: Journal of Economics, Management, Business, and Accounting Research*, 11(1), 786–797. <https://doi.org/10.35794/emba.v11i1.46181>

- Pratiwi, IW, & Yani, RE (2016). The relationship between conformity and consumer behavior in adolescents. *Psychology*, 4(1), 11–21.
- Prihastuty, DR, & Rahayuningsih, S. (2018). The Influence of Financial Literacy, Financial Behavior, Financial Attitude, and Demographics on Consumptive Behavior (A Study of Undergraduate Students of the Faculty of Economics, University of 17 August 1945 Surabaya). *Journal of Research Results of LPPM Untag Surabaya*, 03(02).
- Putri, WTI, & Sumiari, KN (2021). The Influence of Financial Literacy on Students' Financial Behavior. *E-Journal of Economics and Business, Udayana University*, 10(03), 127–134. <https://doi.org/10.24843/eeb.2021.v10.i03.p03>
- Ramadani, N., Siburian, M., Nababan, S., Sitanggang, TL, Angin, EP, Hutabarat, A., & Meiriza, MS (2024). The Effect of Pocket Money on the Consumption Level of Economics Education Students, Class of 2023, State University of Medan. *Journal of Education and Economics*, 9(1), 172–182. <https://doi.org/10.53958/wb.v9i1.510>
- Ramadhani, RH (2019). THE EFFECT OF FINANCIAL LITERACY, ELECTRONIC MONEY, LIFESTYLE, AND SELF-CONTROL ON STUDENTS' CONSUMER BEHAVIOR (CASE STUDY OF STUDENTS OF MANAGEMENT AT THE UNIVERSITY OF NORTH SUMATERA) [University of North Sumatra]. <https://doi.org/10.56406/sahidbankingjournal.v3i01.126>
- Rikayanti, VR, & Listiadi, A. (2020). The Influence of Financial Literacy, Financial Management Learning, and Pocket Money on Saving Behavior. *Journal of Accounting Education (JPAK)*, 8(3), 125–132. <https://doi.org/10.26740/jpak.v8n3.p29-36>
- Rismayanti, T., & Oktapiani, S. (2020). The Influence of Pocket Money and Lifestyle on the Consumptive Behavior of Students of the Faculty of Economics and Business, Sumbawa University of Technology. *Nusantara Journal of Economics*, 02(02), 31–37.
- Roy, P., & Datta, D. (2022). Theory and Models of Consumer Buying Behavior: A Descriptive Study. *SSRN Electronic Journal*, August. <https://doi.org/10.2139/ssrn.4205489>
- Rozaini, N., & Harahap, SN (2019). The Influence of Islamic Economics Courses and Pocket Money on Consumptive Behavior. *Niagawan*, 8(3), 223–233. <https://doi.org/10.24114/niaga.v8i3.15581>
- Rozaini, N., & Sitohang, A. (2020). The Influence of Pocket Money Management and Modernity on the Consumptive Behavior of Students in the Economics Education Study Program, Faculty of Economics, Medan State University, Stambuk 2018. *Eka Prasetya Business Management Journal*, 6(2), 1–8. <https://doi.org/10.47663/jmbep.v6i2.59>
- Sani, LL, Suherti, H., & Aisyah, I. (2023). Comparative Study of Personal Financial Management Reviewed from Financial Knowledge and Gender. *Journal of Science ...*, 1(1). <https://ejurnal.kampusakademik.co.id/index.php/jssr/article/view/229%0Ahttps://ejurnal.kampusakademik.co.id/index.php/jssr/article/download/229/229>
- Sari, DE, Tiara, Narimo, S., & Saputra, RC (2020). The effect of financial literacy and pocket money on consumer behavior of Universitas Muhammadiyah Surakarta (Ums) students. *International Journal of Scientific and Technological Research*, 9(2), 4235–4237.
- Septiansari, D., & Handayani, T. (2021). The Influence of Online Shopping on Consumer Behavior among College Students During the COVID-19 Pandemic. *Technology*, 5(1), 53–65. <http://journal.lembagakita.org>
- Setiawan, A., & Australiati Saragih, A. (2022). The Correlations Between Fanaticism and Consumptive Behavior on BTS Fans in Medan. *Jurnal Islamika Granada*, 3(1), 5–10.
- Sihombing, IFB (2022). Analysis of Factors Influencing Consumer Purchasing Decisions at Sun Supermarket Medan. Medan Area University.
- Skinner, B.F. (2005). Science and Human Behavior. In *Learning and Memory: A Comprehensive Reference*. <https://doi.org/10.1016/B978-012370509-9.00087-5>
- Sugiyono, P. (2023). QUALITATIVE, QUALITATIVE RESEARCH METHODS and R&D. ALFABETA, CV.
- Sugiyono. (2022). Qualitative Research Methods (For research that is: exploratory, enterprising, interactive, and constructive). In *Qualitative Research Methods*. ALFABETA, CV.
- Sukirno, S. (2008). *Microeconomics: An Introduction to Theory* (3rd ed.). PT Rajagrafindo Persana.

- Supriyannah, & Ayuningsari, AAK (2024). ISSN : 2303-0178 ANALYSIS OF FACTORS AFFECTING DEMAND FOR IMPORTED GOODS ON E- ABSTRACT INTRODUCTION The success of a country's economic development can generally be measured and described through its economic growth rate. Economic development. E-Jurnal EP Unud, 13, 423–433.
- Trading, PK (2024). Digital Trade (E-Commerce) in Indonesia 2023 Period. <https://satudata.kemendag.go.id/ringkasan/produk/perdagangan-digital-e-commerce-indonesia-periode-2023>
- Venny, S., & Asriati, N. (2022). Demand and Supply in Microeconomics. Journal of Economic Education (JURKAMI), 7(1), 184–194. <https://doi.org/10.31932/jpe.v7i1.1583>
- Wahyudi, AYH (2017). THE EFFECT OF POCKET MONEY AND LIFESTYLE ON SAVING INTEREST. In Accounting Journal. Sanata Dharma University.
- Winarti, W., & Supyan, I.S. (2021). The Role of Financial Literacy in Managing Individual Financial Planning. Proceedings of FRIMA (Festival of Scientific Research in Management and Accounting), 4, 49–56. <https://doi.org/10.55916/frima.v0i4.356>
- Wooldridge, J. M. (2019). Introductory Econometrics: A Modern Approach.
- Yanto, RTY, & Anjasari, AD (2021). The Influence of E-Service Quality on E-Commerce Customer Satisfaction (Case Study of Shopee Online Store Users). Journal of Business and Marketing, 11(1), 1–13.
- Yuliana, R., Sutrisno, J., & Dewi, TR (2021). Analysis of Consumer Behavior Types Towards Decisions to Purchase Tea Products in Surakarta City. Daun: Scientific Journal of Agriculture and Forestry, 8(1), 43–52. <https://doi.org/10.33084/daun.v8i1.2178>
- Zulfaldi, MF, & Sulhan, M. (2023). The Influence of Financial Literacy, Lifestyle, and Self-Control on Financial Behavior of PTKIN Students in East Java. Scientific Journal of Management, Economics, & Accounting (MEA), 7(2), 807–820. <https://doi.org/10.31955/mea.v7i2.3056>