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The Influence of Digital Wallet Use on Student Consumptive Behavior

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Abstract

Purpose: This study aims to analyze the influence of digital wallet usage on the consumer behavior of students at Muhammadiyah University of Makassar, considering the increasingly massive adoption of financial technology among the younger generation.

Methodology: The study used a quantitative approach with a survey design of 47 active students selected through purposive sampling. The research instrument was a 5-point Likert scale questionnaire that had been tested for validity and reliability. Then, it was analyzed through the Shapiro-Wilk normality test and simple linear regression using SPSS Statistics version 26.

Results: The results of the study showed that the use of digital wallets had a positive and significant effect on student consumer behavior (t count = 2.393 > t table = 2.014; p = 0.021 < 0.05). The regression coefficient was 0.418 with R^2 = 0.113 (11.3%), which means that the use of digital wallets explains 11.3% of the variation in consumer behavior.

Conclusions: The use of digital wallets has been proven to increase students' consumer behavior, so it is necessary to increase financial literacy so that students can use digital wallets more wisely.

Limitations: This study was limited to 47 respondents from one college, so generalization of the results needs to be done with caution.

Contribution: These findings can be a basis for consideration for students, educational institutions and regulators in designing more effective digital financial literacy programs

Keywords: *Digital Wallet, Consumer Behavior, Students, E-Wallet, Cashback Promo*

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1. Introduction

The rapid development of information and communication technology has brought fundamental changes to various aspects of human life, including how people conduct transactions and manage their finances. One concrete manifestation of this change is the emergence of financial technology (fintech). In Indonesia, fintech's growth has been rapid and has significantly transformed the national financial industry landscape. According to , the value of electronic money transactions in Indonesia in 2023 reached more than IDR 835 trillion, an increase of more than 100% compared to the previous three years. This figure reflects a significant shift from a cash-based lifestyle to a cashless one among Indonesians.

One of the most popular and widely used fintech products today is the digital wallet or electronic wallet (e-wallet). Digital wallets are smartphone-based applications that allow users to store, transfer, and use funds electronically for various everyday transactions. In Indonesia, several digital wallet platforms that dominate the market include GoPay, ShopeePay, OVO, and Dana. All four have millions of active users and continue to grow in line with increasing internet and smartphone penetration across the archipelago. The internet penetration rate in Indonesia has reached 78.19% of the total population, making Indonesia one of the countries with the largest number of internet users in Southeast Asia. This rapid uptake of digital financial tools mirrors broader patterns of digital adoption among small economic actors, where ease of access and perceived usefulness consistently predict continued use (Effendi, Sugandini, & Istanto, 2020; van Laar, van Deursen, van Dijk, and de Haan (2020)).

Among college students, the use of digital wallets has become an integral part of their daily lives. The convenience offered by these platforms, from paying for food and ride-hailing, online shopping, and bill payments, has made them increasingly popular among the younger generation. Furthermore, attractive features such as cashback, discount promotions, reward points, and special offer notifications, aggressively promoted by digital wallet platforms, also contribute to the appeal of these services. Comparable promotional mechanisms have been shown to shape financial behavior more broadly, whether in digital marketing contexts or financial literacy interventions aimed at small business actors (Bouwman, Nikou, & de Reuver, 2019; Eniola, & Entebang, 2017).

However, behind these various conveniences, there are serious concerns regarding their impact on student consumption patterns. Several previous studies have indicated that the ease of digital transactions can encourage consumptive behavior, namely the tendency to overspend that is not based on rational needs, but rather triggered by emotional impulses, the influence of promotions, and ease of access (Sumartono, 2002). This is exacerbated by the fact that students, as a young age group, generally do not have a steady income and are still in the stage of forming financial habits, making them highly vulnerable to influences that encourage wasteful behavior. This vulnerability among young, income-constrained populations is consistent with broader financial literacy research showing that entrepreneurial and economic literacy jointly shape how well young economic actors manage financial pressure (Ye & Kulathunga, 2019).

This phenomenon is further complicated by the fact that today's students are part of a digital native generation that grew up alongside the rapid advancement of financial technology. This generation is accustomed to easy access to information and instant transactions via smartphones, making it psychologically easier to accept and adopt new payment technologies without much consideration of the risks. While this characteristic offers the advantage of time efficiency and ease of transactions, it also increases vulnerability to uncontrolled consumer behavior, especially when faced with various digital marketing strategies specifically designed to encourage continuous purchases. This ease of technology adoption without full risk consideration parallels findings from public administration and e-government research, where transparency and perceived accessibility shape adoption more strongly than formal risk disclosure alone (Sabani, 2021; Turner, Prasojo, & Sumarwono, 2022; Andersen, & Nielsen, 2020). This generational pattern of technology accommodation is consistent with broader accountability and trust research, which finds that younger users tend to extend a degree of default trust to digital systems that older users acquire only gradually (Wang, Waldman, & Ashforth, 2019; Fernanda, & Nav, 2020).

The phenomenon of reduced "pain of paying" when transacting digitally is one of the main psychological mechanisms explaining the relationship between digital wallet use and increased consumption. In his research, Soman (2001) explained that when someone pays using physical money, there is a fairly strong affective response in the form of a real sense of loss. Conversely, when payments are made digitally, this affective response is much weaker, so individuals tend to spend more easily and more frequently.

This study aims to provide empirical evidence regarding the influence of digital wallet usage on student consumer behavior, particularly at the University of Muhammadiyah Makassar. The selection of this research location is based on the consideration that Makassar, as a metropolitan city in Eastern Indonesia, has a continuously increasing digital wallet penetration rate. However, empirical research on its impact on student consumer behavior in this city is still very limited. Furthermore, this research is expected to provide practical contributions for students, educational institutions, and policymakers in designing effective financial literacy programs in the digital era.

Based on this background, the research problem formulation in this study is: Does the use of digital wallets have a positive and significant effect on the consumer behavior of students at the University of Muhammadiyah Makassar? The purpose of this study is to analyze and empirically prove the effect of digital wallet use on the consumer behavior of students at the University of Muhammadiyah Makassar.

2. Literature Review and Hypothesis Development

2.1 Digital Wallet (E-Wallet) Concept

A digital wallet, or e-wallet, is a financial technology innovation that allows users to conduct various financial transactions electronically via smartphone. According to Liébana-Cabanillas, Sánchez-Fernández, and Muñoz-Leiva (2014), an e-wallet is a digital payment system that allows users to easily store payment information and conduct transactions anytime and anywhere without having to use cash. From a regulatory perspective, Bank Indonesia defines electronic money as a means of payment issued based on the value of money deposited in advance by the holder with the issuer (Bank, 2020).

In Indonesia, the digital wallet ecosystem has grown rapidly, with various platforms competing for market share. GoPay, a subsidiary of Gojek, ShopeePay, integrated with the Shopee online shopping ecosystem, OVO, which partners with various offline merchants, and Dana, backed by Alibaba Group's Ant Financial, all offer their own features and advantages to attract as many users as possible. According to the Financial Services Authority by Financial (2022), the number of digital wallet users in Indonesia continues to experience exponential growth, particularly accelerated by the COVID-19 pandemic, which has driven people to shift to cashless transactions.

The use of digital wallets can be measured from several dimensions, including the frequency of use, namely how often users make transactions using digital wallets in a certain period, intensity of use, namely how large a proportion of transactions are made through digital wallets compared to other payment methods, ease of access, namely user perceptions of the ease of using digital wallet applications, and dependency, namely the extent to which users feel dependent on digital wallets to meet their daily transaction needs (Zahra & Anoraga, 2021).

Despite the various conveniences offered, using digital wallets also carries a number of risks that users should be aware of. Ease of transactions, not coupled with adequate financial awareness, can potentially lead users to make unplanned expenses. Furthermore, the lack of physical barriers to digital transactions makes users less aware of accumulated spending over a given period. Various promotional features, such as cashback, discounts, and loyalty programs aggressively offered by digital wallet providers, also contribute to increased transaction frequency, which in turn can trigger consumer behavior if not balanced with sound financial management.

2.2 The Concept of Consumptive Behavior

Consumer behavior is one of the most widely researched topics in the fields of economic psychology and consumer behavior. In general, consumer behavior is defined as an individual's tendency to make excessive purchases or expenditures, exceeding actual needs, and based more on emotional desires than rational considerations (Sumartono, 2002). Tambunan (2001) adds that consumer behavior is characterized by several main characteristics, namely: impulsive buying, a tendency to over-respond to promotions and discounts, spending that exceeds the established budget, and purchasing items that are essentially unnecessary.

In the context of college students, consumer behavior has quite serious implications. Most students do not yet have their own income and still rely on remittances from parents or scholarships as their primary source of finance. This situation means that uncontrolled spending can have a direct negative impact on students' financial condition and can even disrupt their studies. Research by Sanny et al. (2023), published in the Journal of Independent Insan Education, found that low levels of financial literacy are positively correlated with high levels of consumer behavior among college students in Indonesia.

The consumer behavior indicators used in this study were adapted from Sumartono (2002) and Tambunan (2001), which include the purchasing goods due to discounts or cashback even though they are not needed, the habit of using digital wallet promotions for transactions, the tendency to shop beyond the set budget, impulsive purchases when seeing promotional notifications, using digital wallets to fulfill desires rather than needs; and feeling easily tempted to shop when using a digital wallet.

Unchecked consumer behavior can have various negative long-term consequences, both financially and psychologically. Financially, students who habitually engage in consumer behavior are at risk of financial difficulties, including the possibility of getting into debt or taking out online loans to cover shortfalls caused by excessive spending. Psychologically, this habit can lead to anxiety and stress when financial conditions do not align with established lifestyles. Therefore, understanding the factors driving consumer behavior, including the role of digital wallet use, is crucial as a basis for formulating appropriate interventions, both in the form of education and policies that support healthier financial management among students.

2.3 Theoretical Basis

The Theory of Planned Behavior (TPB) proposed by Ajzen (1991) is one of the main theoretical foundations in this research. This theory states that individual behavior is influenced by three main factors, namely attitude toward behavior, namely an individual's positive or negative evaluation of a particular behavior subjective norm, namely an individual's perception of social pressure to perform or not perform a behavior, and perceived behavioral control, namely an individual's belief in their ability to control a particular behavior. In the context of this research, intensive use of digital wallets forms a positive attitude towards ease of transactions, which ultimately encourages individuals to behave more consumptively.

In addition to TPB, this study is also based on the Stimulus-Organism-Response (SOR) framework developed by Mehrabian and Russell (1974) and subsequently widely applied in consumer behavior research. The SOR model explains that environmental stimuli (in this case, digital wallet features such as promotional notifications and checkout convenience) will influence the internal state of an individual (organism) in the form of emotions, attitudes, and perceptions, which then produce a response in the form of behavior, in this case consumer behavior. This theoretical approach is very relevant to explain how the design and features of digital wallet applications are intentionally designed to stimulate users to make more frequent transactions.

These three theoretical foundations-TPB, SOR, and the pain of paying concept-complement each other in explaining the phenomenon of digital wallet usage and student consumer behavior. TPB explains the cognitive and social aspects underlying behavioral intentions, SOR explains the internal psychological processes that occur when individuals are exposed to stimuli from digital wallet application features, while the pain of paying concept explains the affective mechanisms that lead to reduced psychological barriers to shopping. The integration of these three theoretical frameworks provides a more comprehensive understanding of how the ease of digital transactions can encourage consumer behavior among students.

The concept of "pain of paying," proposed by Prelec and Loewenstein (1998), is also relevant in explaining this phenomenon. They argue that cash payments evoke a stronger psychological sense of loss compared to non-cash payments. When using a digital wallet, users don't feel the physical reduction in their wallet, thus significantly lowering the psychological barrier to spending. This is confirmed by Soman (2001), who found that individuals tend to spend more money when using non-cash payment methods compared to cash. This behavioral pattern is consistent with broader service-quality and customer-satisfaction research, which finds that the perceived convenience of a service channel shapes usage intensity independently of the underlying financial risk involved (Kant & Jaiswal, 2017; Kim & Lee, 2021).

2.4 Research Hypothesis

Based on the theoretical framework and previous empirical findings, digital wallet usage is expected to influence consumer behavior by facilitating cashless transactions and encouraging purchasing activities through various digital payment features. These arguments provide the basis for examining the relationship between digital wallet usage and consumer behavior among university students. Accordingly, the following hypothesis is proposed:

> H_1: The use of digital wallets has a positive and significant effect on the consumer behavior of students at Muhammadiyah University of Makassar

3. Research Methodology

3.1 Types and Design of Research

This research uses a quantitative approach, a research approach that emphasizes theory testing through numerical measurements of research variables and data analysis using statistical procedures (Sugiyono, 2019). The research design used is survey research, in which data is collected from a group of respondents systematically selected to represent a larger population. Survey research was chosen because it allows for efficient data collection from a relatively large number of respondents simultaneously.

According to Creswell (2014), quantitative research using a survey design is most appropriate when researchers want to describe population trends or statistically explain relationships between variables. In this case, the researchers wanted to explain the relationship between the variables of digital wallet usage (X) and student consumer behavior (Y) based on data collected from a sample of students at Muhammadiyah University of Makassar.

3.2 Population and Sample

The population in this study was all active students at Muhammadiyah University of Makassar who have used digital wallets in their daily lives. Due to limited data on the exact number of digital wallet users on campus, sampling was conducted using a purposive sampling technique, which is a sampling technique based on certain considerations or criteria established by the researcher (Sugiyono, 2019).

The sample inclusion criteria for this study were active students at Muhammadiyah University of Makassar in the 2024/2025 academic year, actively using at least one digital wallet platform for at least the past three months, and willing to complete the research questionnaire completely and honestly. The number of samples collected in this study was 47 respondents. Although this number is relatively small, it has met the recommended minimum limit for simple linear regression analysis, which is a minimum of 30 respondents (Hair et al., 2019).

3.3 Research Instruments

The research instrument used was a structured questionnaire with a 5-point Likert scale, where 1 = Strongly Disagree (STS), 2 = Disagree (TS), 3 = Neutral (N), 4 = Agree (S), and 5 = Strongly Agree (SS). The questionnaire consisted of two main sections. The first section contained questions regarding the respondents' identity and characteristics, including gender, study program, academic year, type of digital wallet used, and average monthly spending through digital wallets.

The second section contains statements measuring the research variables. The independent variable (X), namely digital wallet usage, is measured through eight items covering the dimensions of frequency of use, transaction intensity, ease of access, and dependence on digital wallets. These items are adapted from instruments developed by Zahra and Anoraga (2021) and Sari et al. (2021). The dependent variable (*Y*), namely consumer behavior, is measured through 14 items covering the dimensions of impulsive buying, response to promotions, and overspending. These items are adapted from instruments by Sumartono (2002) and Tambunan (2001).

Operational definitions of the variables in this study were developed to provide clear boundaries for the concepts being measured. Digital wallet usage (*X*) is defined as the level of student involvement in utilizing digital wallet applications for various daily transaction needs, as reflected in the frequency, intensity, ease of access, and dependence on these services. Consumptive behavior (*Y*) is defined as the tendency of students to make purchases or expenditures driven by emotional factors and promotional influences, exceeding actual rational needs, as reflected in impulsive purchases, responses to promotions, and spending beyond budget. These two variables were measured using a questionnaire instrument that had been tested for validity and reliability before being used for research data collection.

3.4 Data Analysis Techniques

To examine the proposed hypothesis and ensure the validity of the research findings, the collected data were systematically analyzed using a series of statistical procedures. These analyses were conducted to evaluate the quality of the research instrument, verify the assumptions required for parametric analysis, and test the relationship between the study variables. The statistical analysis consisted of the following stages:

1. Validity Test: This is performed by calculating the Pearson correlation coefficient between each item's score and the total variable score. An item is considered valid if the r value is ≥ 0.30 (Sugiyono, 2019). The validity test aims to ensure that each item in the questionnaire actually measures what it is supposed to measure.
2. Reliability Test: This is done by calculating the Cronbach Alpha value to measure the internal consistency of the research instrument. An instrument is considered reliable if the Cronbach Alpha value is ≥ 0.60 (Nunnally, 1978). A higher Cronbach Alpha value indicates better consistency between the items in the instrument.
3. Normality Test: Conducted using the Shapiro-Wilk test due to the relatively small sample size ($n < 50$). Data are considered normally distributed if the significance value (p) is > 0.05 (Santoso, 2019). A normality test is required as one of the basic assumptions in linear regression analysis.
4. Descriptive Statistics: Conducted to provide a general overview of the distribution of respondents' scores on each variable, including the average value (mean) and standard deviation.
5. Simple Linear Regression Analysis: Used to test the effect of the independent variable (digital wallet usage/X) on the dependent variable (consumptive behavior/Y). The regression model used is $Y = a + bX$, where Y is consumptive behavior, a is a constant, b is the regression coefficient, and X is digital wallet usage. The significance of the effect is assessed based on the calculated t-value and p-value.

All statistical analyses were performed using SPSS Statistics software version 26. The decision-making criteria for the hypothesis test used a significance level of $\alpha = 0.05$ and a two-tailed test. The hypothesis was accepted if the calculated t value > t table or p value < 0.05.

4. Results and Discussions

4.1 Respondent Characteristics

This study involved 47 active students at Muhammadiyah University of Makassar as respondents. A complete overview of the respondents' demographic characteristics is presented in Table 1 below.

Table 1. Characteristics of research respondents

Characteristics	Category	Frequency	Percentage (%)
Gender	Woman	39	83.0
	Man	8	17.0
Study program	Management	13	27.7
	Psychology	13	27.7
	Accountancy	10	21.3
	Other	11	23.4
Force	2023	8	17.0
	2022	22	46.8
	2024	12	25.5
	2025	5	10.6
Digital Wallet	GoPay	19	40.4
	ShopeePay	14	29.8
	Funds	10	21.3
	OVO	4	8.5
Expenses/Month	<Rp100,000	5	10.6
	Rp100,000-Rp300,000	18	38.3
	Rp. 300,000-Rp. 500,000	10	21.3
	>Rp. 500,000	14	29.8

Based on Table 1 above, it can be seen that the majority of respondents were female (83%), reflecting the general composition of students at Muhammadiyah University of Makassar. This predominance of female respondents is also theoretically relevant, as several previous studies have shown that women tend to be more susceptible to consumer behavior than men, particularly in the categories of fashion, food, and cosmetics purchases through digital platforms (Oliveira, Thomas, Baptista, & Campos, 2016).

The study programs with the highest participation rates were Psychology and Management, with 27.7% each. This is understandable, considering both programs have a significant student population at Muhammadiyah University of Makassar. In terms of enrollment, the 2022 intake dominated with 46.8%. They are students in their fifth and sixth semesters and are considered to have been using digital wallets for quite some time in their campus life.

GoPay is the most widely used digital wallet (40.4%), followed by ShopeePay (29.8%), and Dana (21.3%). GoPay's dominance is understandable given the strong Gojek ecosystem in Makassar, particularly for its online transportation and food delivery services (GoFood), which are widely used by students. In terms of spending, 29.8% of respondents spend more than IDR 500,000 per month through digital wallets, a significant amount for students who generally don't have an income.

The finding of a high proportion of students with digital wallet spending exceeding Rp 500,000 per month is noteworthy, given that most students lack a steady income and rely on parental remittances or scholarships. Compared to the typical student's basic monthly needs, this expenditure figure is quite substantial and could potentially disrupt budget allocations for other essential needs, such as education, basic necessities, and savings. This spending pattern further underscores the urgency of improving digital financial literacy among students to prevent the ease of transactions offered by digital wallets from leading to personal financial problems. Comparable patterns of resource-intensive engagement have been documented in employee and organizational settings, where high engagement with a convenient system or channel does not necessarily correspond to proportionally better underlying outcomes (Lai, Tang, Lu, Lee, & Lin, 2020; Riyanto, Endri, & Herlisha, 2021; Bhatti, Soomro, & Shah, 2021).

4.2 Validity and Reliability Test

Validity and reliability testing was conducted to ensure that the research instrument accurately and consistently measures its intended constructs. Validity was assessed using the Pearson correlation coefficient between each item's score and the total variable score, with an item considered valid if $r \geq 0.30$. Reliability was assessed using Cronbach's Alpha, with an instrument considered reliable if the value is ≥ 0.60.

Table 2. Validity and reliability test results

Variable	Total Items	Valid Items	r Range (Valid Items)	Cronbach Alpha	Reliability Category
Digital Wallet Usage (*X*)	8	7	0.441 - 0.667	0.617	Reliable (Quite Reliable)
Consumer Behavior (*Y*)	14	14	0.391 - 0.772	0.867	Reliable (High Reliability)

Table 2 shows that of the eight items measuring digital wallet usage (*X*), seven items were declared valid with correlation coefficients ranging from 0.441 to 0.667 ($p < 0.05$), while one item, X_8, had an r value of 0.228, below the critical value of 0.30, and was therefore declared invalid and excluded from further analysis. This item relates to a statement regarding preference for using digital wallets for small nominal transactions, which is suspected to have been interpreted inconsistently by some respondents. All 14 items measuring consumer behavior (*Y*) were declared valid, with r values ranging from 0.391 to 0.772 ($p < 0.05$); item Y_{13} recorded the highest correlation ($r = 0.772$), indicating excellent discriminatory power, while item Y_3 recorded the lowest ($r = 0.391$), still comfortably above the critical threshold. The reliability test further shows that the Cronbach's Alpha value for digital wallet usage was 0.617, falling into the "quite reliable" category, while the value for consumer behavior was 0.867, falling into the "high reliability" category, confirming that both instruments possess adequate internal consistency for subsequent analysis.

4.3 Descriptive Statistics, Normality, and Regression Analysis

Descriptive statistics were calculated to summarize the distribution of scores for each variable, the Shapiro-Wilk test was used to assess normality given the relatively small sample size ($n < 50$), and simple linear regression was used to test the study's hypothesis regarding the effect of digital wallet usage on consumer behavior.

Table 3. Descriptive statistics, normality test, and regression analysis results

Statistic	Digital Wallet Usage (*X*)	Consumer Behavior (*Y*)
N	47	47
Minimum	2.57	2.43
Maximum	5.00	5.00
Mean	3.94	3.83
Std. Deviation	0.499	0.620
Shapiro-Wilk (W)	0.975	0.941
Sig. (p-value)	0.409	0.035
Normality Conclusion	Normally Distributed	Slightly Deviant
Regression Constant (a)	-	2.188
Regression Coefficient (b)	-	0.418

Statistic	Digital Wallet Usage (X)	Consumer Behavior (Y)
Correlation Coefficient (r)	-	0.336
Coefficient of Determination (R^2)	-	0.113
t count	-	2.393
t table (df=45, α=0.05)	-	2.014
Regression p-value	-	0.021
Hypothesis Decision	-	H_1 Accepted (Significant Effect)

Table 3 shows that the mean digital wallet usage score (X) among student respondents was 3.94 (SD = 0.499), while the mean consumer behavior score (Y) was 3.83 (SD = 0.620), both indicating a relatively high average level of agreement across items. The Shapiro-Wilk normality test yielded a significance value of 0.409 for digital wallet usage, well above the 0.05 threshold, confirming a normal distribution, whereas the value for consumer behavior was 0.035, slightly below the threshold, indicating a mild deviation from normality that, given the sample size and the robustness of linear regression to minor normality violations, does not substantially threaten the validity of the subsequent regression analysis. The regression results show a constant of 2.188 and a regression coefficient of 0.418, yielding the equation $Y = 2.188 + 0.418X$, with a correlation coefficient of 0.336 and a coefficient of determination (R^2) of 0.113, indicating that digital wallet usage explains 11.3% of the variation in consumer behavior. The calculated t value of 2.393 exceeds the t table value of 2.014 (df = 45, α = 0.05), with a p-value of 0.021, below the 0.05 threshold, leading to acceptance of H1: digital wallet usage has a positive and significant effect on student consumer behavior.

4.4 Discussion

The results of this study consistently support the proposed hypothesis, namely that digital wallet use has a positive and significant impact on student consumer behavior. This finding reinforces and aligns with previous research conducted in various contexts in Indonesia.

Ming and Jais (2022) found in her research that the ease of transactions via e-wallets positively impacted impulsive buying among students, primarily through a reduction in psychological barriers to shopping. To and Trinh (2021) research also concluded a similar finding, namely that digital wallet adoption significantly increased student consumption expenditure, particularly in the food, beverage, and entertainment categories. Furthermore, Sari, Utama, and Zairina (2021) research on students in Surabaya found that the cashback and discount features offered by e-wallet platforms were the primary factors driving increased online shopping frequency among students.

The consistency of this research's findings with those of previous studies indicates that the relationship between ease of digital transactions and consumer behavior tends to be universal, occurring not only in the context of students in Makassar but also across student populations in other regions of Indonesia. This indicates that this phenomenon is not solely an individual issue but is also closely related to the design characteristics of financial technology itself, which is systematically designed to maximize the frequency and value of user transactions.

The mechanisms underlying this positive relationship can be explained through several theoretical perspectives. First, from the perspective of the pain of paying concept, digital wallets fundamentally change how individuals perceive spending money. In his classic study, Soman (2001) demonstrated that cashless payments significantly reduce the sense of loss associated with spending money, leading individuals to shop more frequently and in greater quantities. When students transact using GoPay or ShopeePay, they don't see or physically feel the money leaving their wallets, unlike when they use cash.

Second, from the perspective of the Theory of Planned Behavior (Ajzen, 1991), the intensity of digital wallet use shapes increasingly positive attitudes toward the ease and convenience of digital shopping. The more frequently students use digital wallets and experience their benefits, the stronger their positive attitudes toward digital transactions become, which ultimately increases their shopping intentions and behavior. The subjective norms developing among students, where using digital wallets is perceived as modern and practical, also reinforce this behavior.

Third, digital wallet app design, which is deliberately designed to maximize user engagement, also plays a significant role. Features such as push notifications for limited-time promotions, an intuitive and user-friendly interface, a simple checkout process, and a loyalty program with reward points all contribute to lowering barriers to shopping and increasing transaction frequency (Zahra & Anoraga, 2021). Descriptive statistics in this study support this, with items Y_3 (frequently purchasing products due to cashback) and Y_2 (regularly utilizing digital wallet promotions) having the highest mean values among all Y variable items.

Although the effect was proven significant, the R^2 value of 11.3% indicates that digital wallet usage only explains a small portion of the overall variation in student consumer behavior. This is very reasonable considering that consumer behavior is a multidimensional phenomenon influenced by many factors. (Rodrigues, Oliveira, & Costa, 2016) showed that financial literacy has a significant influence on student consumer behavior. Other factors that potentially contribute to student consumer behavior include peer pressure, exposure to social media and digital advertising, family income level, self-control, local cultural values, and individual psychological conditions such as self-esteem and anxiety (Oliveira, Thomas, Baptista, & Campos, 2016; Püschel, Mazzon, & Hernandez, 2010).

The findings of this study have important practical implications for various parties. For students themselves, these findings serve as a reminder to be more aware and wise in using digital wallets. The ease of transactions offered should not be a justification for wasteful spending, but rather must be balanced with thorough financial planning and discipline in adhering to established budgets. For educational institutions, these findings underscore the urgency of integrating digital financial literacy materials into their curriculum or student development programs. For governments and regulators such as the Financial Services Authority (OJK) and Bank Indonesia, these findings can be considered in designing more comprehensive digital consumer protection policies, including regulations regarding aggressive promotional practices by digital wallet platforms.

5. Conclusions

Based on a series of statistical analyses conducted on data from 47 active student respondents at Muhammadiyah University of Makassar, this study produced the following conclusions. First, the research instrument used has been proven valid and reliable. Of the eight items in variable X, seven were declared valid, while all 14 items in variable Y were declared valid. Both variables had Cronbach's Alpha values above 0.60, thus the research instrument can be declared reliable and suitable for use in measurement.

Second, descriptively, the average digital wallet usage score (X) of student respondents was 3.94 (SD = 0.499), indicating a fairly intensive level of use. Meanwhile, the average consumer behavior score (Y) was 3.83 (SD = 0.620), indicating a fairly high tendency for consumer behavior. The response pattern shows that students are most influenced by cashback and promotional features in driving their consumer behavior. Third, and most importantly, the use of digital wallets has been shown to have a positive and significant impact on the consumer behavior of students at the University of Muhammadiyah Makassar. This is evidenced by the calculated t value = 2.393 > t table = 2.014 and p value = 0.021 < 0.05. The regression coefficient of 0.418 indicates that every one-unit increase in the intensity of digital wallet use will increase consumer behavior by 0.418 units. The contribution of the digital wallet use variable to variations in consumer behavior is 11.3% ($R^2 = 0.113$), while the remaining 88.7% is influenced by other variables not examined in this study.

Overall, the findings of this study emphasize the importance of student awareness and discretion in utilizing digital wallets as a means of transaction. The convenience offered by financial technology should be optimally utilized to support efficient financial management, rather than fueling waste. Synergy is needed between individual student awareness, support from educational institutions in the form of financial literacy education, and regulatory policies that encourage more responsible promotional practices from digital wallet service providers. This ensures that the benefits of financial technology can be optimally realized without the negative impact of excessive consumer behavior among students.

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Author Contributions

MM contributed to the conceptualization, methodology, investigation, formal analysis, data curation, preparation of the original draft, and review and editing of the manuscript. The author has read and approved the final version of the manuscript.

Conflict of Interest

The author declares that there are no financial, professional, or personal conflicts of interest that could have influenced the research, authorship, or publication of this manuscript.

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