

EXPLORING THE IMPACT OF E-COMMERCE AND DIGITAL SKILLS ON THE CONSUMPTIVE BEHAVIOR OF MUSLIM GENERATION Z IN BANDA ACEH

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Abstract

The advancement of digital technology has significantly influenced consumer behavior, particularly among Generation Z, who are closely connected with e-commerce and digital tools. This study aims to analyze the influence of e-commerce and digital skill on the consumptive behavior of Muslim Generation Z in Banda Aceh. A quantitative approach was used through a survey of 100 purposively selected respondents. Data were collected via online questionnaires and analyzed using multiple linear regression. The results show that both e-commerce and digital skill have a positive and significant influence on consumptive behavior, both partially and simultaneously. E-commerce measured by cost efficiency, platform reputation, and transaction ease contribute to impulsive buying behavior. Digital skill including the ability to assess digital information, use social media, and engage in online transactions also increases consumption tendencies, particularly in the absence of ethical awareness. The coefficient of determination (R^2) value of 0.637 indicates that 63.7% of the variance in consumptive behavior can be explained by the two variables. These findings are crucial in the context of Muslim communities, where excessive consumption contradicts Islamic values such as *tabzir* (wastefulness) and *israf* (extravagance). The study suggests promoting Islamic-based digital literacy to balance technological competence and consumption control.

Keywords: e-commerce, digital skill, consumptive behavior, Generation Z

Abstrak

Perkembangan teknologi digital telah memengaruhi perilaku konsumsi masyarakat, khususnya Generasi Z yang sangat akrab dengan e-commerce dan penggunaan teknologi digital. Penelitian ini bertujuan untuk menganalisis pengaruh e-commerce dan digital skill terhadap perilaku konsumtif Generasi Z Muslim di Kota Banda Aceh. Penelitian ini menggunakan pendekatan kuantitatif dengan metode survei terhadap 100 responden yang dipilih menggunakan teknik purposive sampling. Data dikumpulkan melalui kuesioner daring dan dianalisis menggunakan regresi linier berganda. Hasil penelitian menunjukkan bahwa baik e-commerce maupun digital skill berpengaruh positif dan signifikan terhadap perilaku konsumtif, baik secara parsial maupun simultan. E-commerce, dengan indikator efisiensi biaya, reputasi platform, dan kemudahan transaksi, terbukti mendorong keputusan pembelian impulsif. Digital skill, yang meliputi kemampuan menilai informasi digital, penggunaan media sosial, dan transaksi daring, juga turut meningkatkan kecenderungan konsumtif, terutama jika tidak diiringi oleh kesadaran etis. Nilai koefisien determinasi (R^2) sebesar 0,637 menunjukkan bahwa 63,7% variasi perilaku konsumtif dapat dijelaskan oleh kedua variabel tersebut. Temuan ini relevan dalam konteks masyarakat Muslim, di mana perilaku konsumtif berlebihan dapat bertentangan dengan prinsip syariah seperti *tabzir* dan *israf*. Penelitian ini merekomendasikan perlunya literasi digital berbasis nilai Islam untuk menyeimbangkan kemampuan teknologi dan pengendalian konsumsi.

Kata kunci: e-commerce, digital skill, perilaku konsumtif, Generasi Z

INTRODUCTION

The development of digital technology has brought significant transformations across various aspects of life, including patterns of consumer behavior. Generation Z, born between 1997 and 2012, is a demographic group that has grown up alongside the rapid advancement of information technology. In Indonesia,

Generation Z accounts for approximately 22% of the total population, or around 60 million people (Central Bureau of Statistics [BPS], 2023). As digital natives, Generation Z tends to make extensive use of digital technology in their daily activities, including shopping through e-commerce platforms. The growth of e-commerce in Indonesia shows a highly significant trend.

Figure 1 illustrates the growth of national e-commerce transaction value from 2019 to 2023, which has seen a sharp increase.

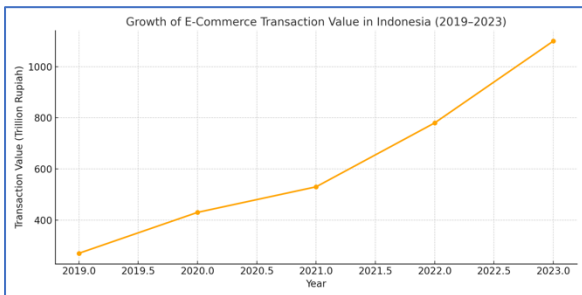


Figure 1.
Growth of E-Commerce Transaction Value in Indonesia

According to reports by the Central Bureau of Statistics (BPS) and Katadata Insight Center, the value of e-commerce transactions in Indonesia reached IDR 1,100.87 trillion in 2023, representing an increase of about 40% compared to the previous year (BPS, 2025; Katadata Insight Center, 2024). This surge is driven by improved internet access, high smartphone penetration, and various innovations in digital payment methods. Generation Z has become a key contributor to this growth, given their technological adaptability and preference for convenience and speed in transactions.

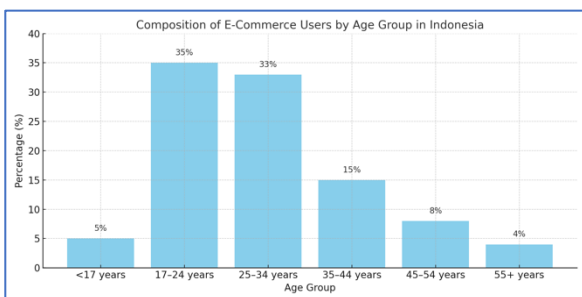


Figure 2.
Composition of E-Commerce Users by Age Group in Indonesia.

At the regional level, the Aceh Province also shows increased public participation in the digital economy. According to the Aceh Communication, Information, and Encryption Agency (Diskominfo Aceh, 2023), there has been a significant rise in the use of e-commerce services in Aceh over the past five years, with more than 65% of active users aged between 17 and 30. In Banda Aceh, local and national e-

commerce applications such as Tokopedia, Shopee, and Grab are increasingly favored, especially among students. A study by Chalisa (2021) found that the benefits and transactional characteristics of e-commerce have a positive and significant effect on consumer behavior.

However, the convenience offered by e-commerce also brings negative impacts, particularly the rise in consumptive behavior among Generation Z. A study by Anggaraeni et al. (2022) showed that the use of e-commerce has a positive and significant effect on students' consumptive behavior, where easy access and various promotional offers encourage impulsive buying. This is supported by findings from Saputro et al. (2021), who stated that the presence of the internet and smartphones makes it easier for students to access e-commerce platforms, thereby increasing the tendency to shop impulsively.

In addition to e-commerce, digital skill plays a crucial role in shaping the consumptive behavior of Generation Z. In today's integrated digital era, digital skill is a fundamental requirement for managing information, engaging in online interactions, and making consumption decisions. According to UNESCO (2023), low digital skill among teenagers may lead to vulnerability to algorithmic manipulation, misinformation, and aggressive data-driven marketing strategies. In Indonesia, a survey by the Indonesian Internet Service Providers Association (APJII, 2023) revealed that although internet penetration is high among individuals aged 16–24, only 48% of respondents in this group possess adequate digital information verification skills.

Research by Aprilia et al. (2022) found that digital skill has a positive and significant effect on online shopping behavior among university students, where individuals with strong digital competencies tend to be more

prudent in their purchases. Conversely, low digital skill makes individuals more susceptible to advertisements and promotions on e-commerce platforms, thereby increasing consumptive behavior. This indicates that without sufficient skills, Generation Z is at high risk of becoming impulsive consumers in a highly personalized and rapidly evolving digital environment.

Banda Aceh, as a city with a predominantly Muslim population, is characterized by strong cultural and religious values. However, digital technology and e-commerce penetration in the city is inevitable. Muslim Generation Z in Banda Aceh faces challenges in balancing the ease of online shopping with Islamic consumption values. This phenomenon is worthy of further exploration, considering the importance of understanding consumptive behavior dynamics in a culturally and religiously specific context.

While many previous studies have examined the influence of e-commerce and digital literacy on student consumptive behavior in various regions of Indonesia, research specifically integrating these two variables within the context of Muslim Generation Z in a region with strong Islamic cultural background, such as Banda Aceh, remains limited. Most existing studies focus on general student populations without considering religious dimensions or explicitly linking their findings to Islamic consumption values. Hence, a research gap exists—a need for contextual understanding of how e-commerce and digital literacy influence consumptive behavior among young Muslims living under Islamic law, such as in Aceh.

Based on this background, this study aims to analyze the influence of e-commerce and digital literacy on the consumptive behavior of Muslim Generation Z in Banda Aceh. It is expected that the results of this study will

contribute to the development of relevant educational strategies and policies to promote wise consumption behavior aligned with Islamic values among the younger generation.

THEORETICAL FRAMEWORK

E-Commerce

E-commerce refers to the buying and selling of goods and services through electronic media such as the internet. According to Maulana (2015), e-commerce facilitates more efficient and flexible transactions by eliminating physical boundaries between sellers and buyers. In the context of consumptive behavior, e-commerce provides convenient access, product variety, and attractive promotions, which indirectly influence impulsive buying decisions (Anggaraeni et al., 2022). The indicators of e-commerce used in this study, as proposed by Prasetio et al. (2021), include cost efficiency, platform reputation, and transaction ease.

Digital Skills

Digital skills are an individual's abilities to effectively use digital technology, including software understanding, application usage, and operating electronic transaction tools. Van & Van (2014) describe digital skill as a crucial component of digital competence, focusing on both technical and practical mastery. In the digital consumption context, digital skills enable individuals to access product information, compare prices, and utilize online transaction features efficiently (Elhajjar & Ouaida, 2019). The indicators used for digital skills in this study, based on Isabella & Permana (2022), include: (1) basic knowledge of the internet and cyberspace, (2) the ability to use search engines and evaluate data, (3) the ability to operate social media, and (4) the ability to use digital transaction applications such as e-wallets and online marketplaces.

Consumptive Behavior

Consumptive behavior is the tendency of individuals to purchase goods or services based on emotional impulses rather than rational needs. In the modern economic landscape, which is saturated with digital advertising, marketing algorithms, and ease of access via e-commerce, consumptive behavior has become increasingly complex. From an Islamic economic perspective, excessive consumptive behavior contradicts the principles of *al-iqtishad* (moderation), efficiency, and responsibility in wealth management (Chalisa, 2021).

In this study, the indicators of consumptive behavior were derived from relevant literature and adjusted to fit the context of Muslim Generation Z consumers. These indicators include: (1) tendency toward impulsive buying, (2) preference for branded or popular products, (3) frequency of unplanned purchases, and (4) spending beyond actual needs. These are based on prior studies on consumer behavior (Saputro et al., 2021; Aprilia et al., 2022) and selected for their relevance in measuring consumption intensity driven by emotional desire and digital exposure.

Thus, these indicators were not only theoretically grounded but also designed with the respondents' characteristics in mind individuals living in a digital environment and frequently exposed to online promotional content. This approach aims to provide a more comprehensive and contextual measurement of consumptive behavior. Based on the theoretical review and previous studies, the relationships among the independent variables (e-commerce and digital skill) and the dependent variable (consumptive behavior) can be explained as follows:

E-commerce offers various conveniences such as fast access, attractive promotions, and abundant product choices. These factors

encourage individuals, particularly Generation Z, to engage more frequently in online shopping, driven both by need and emotion. E-commerce, therefore, acts as a primary driver of increased consumptive behavior, as evidenced by Anggaraeni et al. (2022).

On the other hand, digital skill serves as a technical and practical ability that enables individuals to navigate the digital world efficiently. Those with strong digital skills can search for product information, compare prices, and critically assess digital marketing strategies. However, low digital skill may lead users to shop impulsively due to overwhelming digital exposure. This positions digital skill as a key factor in shaping Generation Z's consumption behavior in today's digital era (Aprilia et al., 2022).

Accordingly, the hypotheses in this study are formulated as follows:

- H₁: E-commerce has a positive and significant effect on the consumptive behavior of Muslim Generation Z in Banda Aceh.
- H₂: Digital skill has a positive and significant effect on the consumptive behavior of Muslim Generation Z in Banda Aceh.
- H₃: E-commerce and digital skill simultaneously have a significant effect on the consumptive behavior of Muslim Generation Z in Banda Aceh.

METHODOLOGY

This study adopts a quantitative approach with an associative research design. The objective is to examine the relationship and influence of e-commerce and digital skill on the consumptive behavior of Muslim Generation Z in Banda Aceh. The population consists of all Muslim Generation Z individuals in Banda Aceh who actively engage in e-commerce transactions.

The sampling technique used is purposive sampling, with inclusion criteria such as being

aged 17 to 26 years, residing in Banda Aceh, and having made at least one e-commerce transaction in the past three months. The age range of 17–26 is selected based on the minimum legal age required to obtain an electronic ID card (e-KTP), which is necessary for opening bank accounts and digital financial services. This ensures that respondents have independent access to digital transaction tools relevant to the study. A total of 100 respondents participated in this study.

Primary data were collected through online questionnaires using a Likert scale of 1 to 5, ranging from strongly disagree to strongly agree. The data collection process involved the dissemination of online forms via social media and digital platforms, with an informed consent statement included for participant approval. Data analysis was conducted through the following stages:

1. Instrument validity and reliability testing.
2. Classical assumption testing (normality, multicollinearity, and heteroscedasticity tests).
3. Multiple linear regression analysis to test partial and simultaneous effects.
4. Coefficient of determination (R^2) and significance testing (t-test and F-test), performed using SPSS or equivalent statistical software.

RESULT AND ANALYSIS

Validity and Reliability Tests

The validity test was performed on all questionnaire items using Pearson Product Moment correlation. The results showed that all items had correlation values greater than 0.30, indicating that all items were valid. Furthermore, the reliability test using Cronbach's Alpha showed the following values: e-commerce variable (0.832), digital skill (0.849), and

consumptive behavior (0.861). All values exceeded the threshold of 0.70, confirming the reliability of the instruments.

Classical Assumption Tests

The normality test using Kolmogorov-Smirnov yielded a significance value of 0.073 (> 0.05), indicating that the data were normally distributed. The multicollinearity test showed tolerance values of 0.584 and variance inflation factors (VIF) of 1.712 for both independent variables, indicating no multicollinearity. The heteroscedasticity test using the Glejser method showed significance values of 0.766 (e-commerce) and 0.630 (digital skill), indicating the absence of heteroscedasticity.

Multiple Linear Regression Analysis

Table 1.
Multiple Linear Regression Test Results

Variabel	Koefisien Regresi (β)	t-hitung	Sig.(p-value)
E-commerce	0,841	8,120	0,000
Digital skill	0,233	2,698	0,008
Constant	2,050	1,731	0,087

Source: Processed data (2025)

The regression equation obtained is as follows:

$$Y = 2,050 + 0,841X_1 + 0,233X_2$$

These results indicate that both e-commerce (X_1) and digital skill (X_2) positively affect consumptive behavior (Y). The regression coefficient for e-commerce is 0.841 ($t = 8.120$, $p = 0.000$), and for digital skill is 0.233 ($t = 2.698$, $p = 0.008$). Since the p-values are less than 0.05, both variables have a significant partial effect.

Simultaneous Test

Table 2
Anova Test Results

Model	Sum of Squares	Df	f-count	Sig.(p-value)
E-commerce	0,841	2	84,926	0,000
Digital skill	0,233	97		
constant	2,050	99		

Source: Processed data (2025)

The F-value of 84.926 with a significance level of $0.000 < 0.05$ indicates that e-commerce and digital skill simultaneously have a significant effect on consumptive behavior.

Coefficient of Determination (R²)

Table 3
Coefficient of Determination Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,798	0,637	0,629	1,57528	1,477

Source: Processed data (2025)

The R² value of 0.637 indicates that 63.7% of the variation in consumptive behavior is explained by e-commerce and digital skill variables, while the remaining 36.3% is explained by other variables outside the model.

DISCUSSION

The findings of this study reinforce the results of Anggaraeni et al. (2022), which show that e-commerce significantly increases the tendency for consumptive behavior, especially through easy access, discounts, and aggressive promotions. This is reflected in the e-commerce indicators in this study, namely transaction ease and cost efficiency, which provide users with a high level of convenience, thereby encouraging consumptive behavior. Respondents who perceived e-commerce platforms as convenient tended to shop more frequently, including making unplanned and impulsive purchases. This finding aligns with Chalisa (2021), who found that among Muslim communities, digital platforms also foster impulsive consumption patterns due to constant exposure to marketing content.

Furthermore, the platform's reputation indicator contributed to consumer trust, accelerating the decision-making process. A good platform reputation creates a sense of security and reduces hesitation when making purchases, even without careful planning. Therefore, e-commerce not only offers practicality but also builds a digital ecosystem that can trigger excessive consumption if not controlled.

Additionally, this study supports Aprilia et al. (2022), who found that digital skill plays a dual role in online consumption. On one hand, digital skill enables consumers to access product

information and services more efficiently through search engines and social media. Indicators such as the ability to assess information, use social media, and operate digital transaction applications significantly influence respondents' consumption tendencies. Individuals with high digital skill levels are more capable of exploring product variations and utilizing online promotions optimally.

On the other hand, without ethical awareness, digital skill may increase susceptibility to impulsive purchases. Respondents with strong digital skills are more exposed to algorithm-based recommendations, targeted advertising, and personalized promotions, all of which drive spontaneous consumption decisions. In the context of Muslim Generation Z in Banda Aceh, this finding indicates that although technology provides convenience and efficiency, it also challenges Islamic values of moderation and wealth management.

In Islam, excessive consumptive behavior is considered a form of *tabzir* (wastefulness) and *israf* (extravagance), both of which are prohibited for being contrary to the principles of prudence and justice in managing sustenance. The Qur'an in Surah Al-Isra' verse 27 states that "the spendthrifts are brothers of the devils," while Surah Al-A'raf verse 31 warns believers not to be excessive in consumption.

Therefore, digital skill should not only be developed in technical terms but must also be complemented by value-based education and Islamic consumption literacy to prevent it from becoming a driver of excessive consumptive behavior. Raising awareness of Islamic values in the use of technology is key for Muslim Generation Z to optimize their digital capabilities without falling into consumption patterns that contradict Islamic principles.

CONCLUSION

This study concludes that both e-commerce and digital skills have a positive and significant influence on the consumptive behavior of Muslim Generation Z in Banda Aceh, both partially and simultaneously. E-commerce facilitates ease in transactions, access to a wide range of products, and attractive promotions, which evidently drive impulsive buying and excessive consumption. Meanwhile, digital skills enable individuals to use technology efficiently but also increase their exposure to commercial information that may trigger emotionally driven consumption decisions.

E-commerce indicators such as cost efficiency, platform reputation, and transaction ease have been identified as key triggers for consumptive behavior. Likewise, digital skill indicators including the ability to assess information, use social media, and operate transaction applications contribute to the intensification of online shopping activities. These findings are particularly important in the context of Muslim communities, where excessive consumption violates the Islamic principles of moderation and prudent wealth management, and is categorized as *tabzir* (wastefulness) and *israf* (extravagance).

This study has several limitations. First, the sample size is relatively small, limiting the generalizability of the findings. Second, the use of a quantitative approach with close-ended questionnaires restricts deeper exploration of motivations and social contexts behind consumptive behavior. Third, the study focuses only on two independent variables e-commerce and digital skills without incorporating other potentially influential factors. Therefore, future research is recommended to expand the study area to include other major cities in Indonesia for broader generalization. Combining quantitative and qualitative approaches could

also provide a more comprehensive understanding. Additionally, including variables such as social media usage intensity, religious values, or digital risk perception may offer new insights into the consumptive behavior of Muslim youth in the digital era.

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