



Exploring The Factors on Student Satisfaction with Digital Payments in Higher Education

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Abstract: The aim of this research is to analyze the factors influencing student satisfaction with the use of digital payment in higher education institutions in Central Java. The research method employed is quantitative, utilizing linear regression analysis. The research findings indicate that the perceived usefulness has a positive and significant impact on student satisfaction regarding the use of digital payment using the Technology Acceptance Model approach in several higher education institutions in Central Java. Perceived ease of use, on the other hand, does not have a significant impact on student satisfaction with the use of digital payment using the Technology Acceptance Model approach in higher education institutions in Central Java. Perceived trust also has a positive and significant influence on student satisfaction with the use of digital payment using the Technology Acceptance Model approach among students in higher education institutions in Central Java. However, perceived security and risk do not have a significant impact on student satisfaction with the use of digital payment using the Technology Acceptance Model approach among students in higher education institutions in Central Java. It is important to note that factors such as perceived usefulness, perceived ease of use, perceived trust, and perceived security and risk collectively have an impact on student satisfaction when using digital payment.

Keywords: student satisfaction; digital payment; technology acceptance model

1. Introduction

In today's rapidly advancing technological landscape, the way we conduct financial transactions has undergone a monumental transformation. Digital payments, once a novelty, have now become an integral part of our daily lives. This shift is not just evident in the commercial sector; the realm of higher education too has witnessed a surge in the adoption of digital payment methods.

Information technology's role in the financial world is no longer a novel concept. As Suyanto (2019) points out, while the potential of IT-based financial services is vast, their adoption can sometimes be impeded by factors such as costs, user habits, and risk. This means that for these services to be optimally utilized by various companies, readiness is required from multiple angles. The growth of financial technology, especially in regions like Indonesia, is substantial. Jatmiko (2018) highlights that financial technology contributed a whopping Rp 25.9 trillion to the Indonesian economy. Anggraeni, Haliah, Kusumawati (2023) further underscores this by noting that over 50% of financial transactions in Indonesia are conducted using e-payment systems. These non-cash payments, driven by modern technology, have proven to be more effective and efficient (Purba, Samsir, & Arifin, 2020). The rapid growth of such payment methods, both domestically and internationally, is accompanied by innovations aimed at making transactions more efficient, secure, swift, and convenient (Amalia, 2018; Anggraeni, Haliah, Kusumawati, 2023; Fathonah, Huda, Kristin, 2021; Perez, 2023). The modern payment systems of today, as Amalia (2018) suggests, can be executed with just a single press of a button, facilitating business activities across borders.

The importance of payment activities often remains concealed beneath the urgency of their underlying transactions. Yet, as Widjojo (2020) aptly points out, the function of payments is paramount. In our modern economy, where the exchange of goods and services occurs at lightning speed, there's a pressing need for a reliable payment system that supports faster, more efficient, secure, and dependable transactions (Selsapagita & Sukardi, 2023; Tanoto, Monica, Grasela, 2021; Widjaja et al., 2020).

A prime example of the digital payment systems prevalent in this era is the OVO application. Widjojo (2020) describes OVO as a digital wallet or e-money in the form of a digital application, functioning as a means of online payment or transactions. Developed by PT. Visionet Internasional under the Lippo Group, OVO's popularity has surged, especially with Lippo's investment in the on-demand transportation service, Grab. Within the Grab application, OVO has become a preferred digital payment method. Moreover, OVO has also become the primary payment method for the renowned online marketplace, Tokopedia. These strategic affiliations with Grab and Tokopedia have significantly boosted OVO's adoption, given the vast user base of both platforms (Ar-Robi & Wibawa, 2019; Mardhotillah et al, 2021; Taufan & Yuwono, 2019). The seamless integration of the OVO payment method in both services means that users can effortlessly top up their OVO balance and use it across various platforms and for diverse needs. Hence, as digital payments continue to evolve and become more sophisticated, it is crucial for all sectors, including higher education, to stay updated with the latest trends and innovations (Fitriana, 2020). Only by doing so can they offer payment solutions that not only facilitate transactions but also enhance the overall user experience.

In addition to serving as a payment method for Tokopedia and Grab, OVO Cash is also usable for transactions at various partner merchants, commonly offering cashback incentives. Generally speaking, OVO is categorized into two main types: OVO Cash, which can be used for a wide array of payments partnered with OVO, resulting in quicker transactions, and OVO Points, which are loyalty rewards for those conducting transactions using OVO Cash at partner merchants. OVO Points can be exchanged for a variety of attractive offers or utilized in subsequent transactions with OVO partner merchants.

OVO offers the convenience of conducting transactions without the necessity of carrying excessive cash (Purba, Samsir, & Arifin, 2020; Rahman et al, 2023). A simple presentation of the OVO application, containing both cash and points balances, suffices. This ease of use has led to OVO's popularity, not only among business owners but also among university students, particularly the millennial generation. However, the emergence of several competitors in the Digital Payment arena means that OVO is not the sole digital payment solution, thereby increasing competition and driving the development of improved and more user-friendly payment systems (Seng & Hee, 2021).

The digital revolution has reshaped numerous sectors, and the financial world is no exception. As highlighted in the background, the rise of digital payments, driven by technological advancements, has transformed the way financial transactions are conducted (Ramli & Hamzah). This shift from traditional to digital payment methods is not merely a trend but a reflection of the evolving needs and preferences of consumers. In the context of higher education, understanding this shift becomes even more critical (Saadon & Long, 2020; Yaakop et al, 2021). Institutions of higher learning cater to a diverse and tech-savvy student population,

making it imperative to modernize their payment infrastructures to enhance the overall student experience (Ing, Wong, & Kim, 2021; Osman & Yi, 2021).

Several factors underscore the need for this research. Firstly, while the global adoption of digital payments is evident, there is a distinct gap in understanding the specific factors influencing student satisfaction with these payment methods in higher education (Fang et al, 2023). As the background information elucidates, digital payment systems like OVO have gained significant traction in regions like Indonesia, becoming integral to daily transactions. However, the question remains: What makes such systems satisfactory or unsatisfactory for students in higher education settings? Secondly, the integration of digital payments in higher education is not just about transactional efficiency, but it is about the broader student experience. A smooth payment process can positively influence a student's perception of an institution, while a cumbersome system can lead to frustration and dissatisfaction (Abdullah, Redzuan, & Daud, 2020). Given the substantial financial transactions students engage in—from tuition fees to accommodation cost—ensuring a satisfactory payment experience is paramount.

Furthermore, the rapid pace of technological advancements means that the digital payment landscape is continually evolving. New innovations, security measures, and user-interface improvements are regularly introduced. For higher education institutions to stay relevant and meet the expectations of their student body, they must be attuned to these changes. This research aims to bridge the knowledge gap, providing insights into student preferences and pain points, thereby enabling institutions to make informed decisions. Lastly, the economic implications cannot be overlooked. As highlighted by Jatmiko (2018), financial technology has made significant contributions to economies, with Indonesia alone seeing a contribution of Rp 25.9 trillion. By understanding student satisfaction factors, higher education institutions can potentially drive further economic growth by fostering a conducive environment for digital payment providers to innovate and expand.

In essence, this research is not just an academic exercise but a timely and necessary exploration. It seeks to understand the nuances of student satisfaction with digital payments in higher education, aiming to inform, guide, and influence institutional strategies, ensuring they align with the evolving needs of the modern student.

2. Method

This research comprised an analytical observational study that employed a cross-sectional approach with a quantitative orientation. In this methodology, we measured or collected research variables simultaneously, indicating that observations were conducted only once for several variables at the same time. The quantitative approach involved utilizing secondary data collected through the distribution of questionnaires. The research's focus was on Digital Business, specifically centering on customer satisfaction regarding the use of Digital Payment. The study aimed to identify the factors that influenced student satisfaction with the utilization of Digital Payment, employing the Technology Acceptance Model (TAM) approach within the context of higher education.

Primary data sources were employed in this research, gathered directly from respondents selected as the study's sample. In the quantitative approach, primary data was collected through questionnaires distributed by the researcher. The research population in the quantitative approach consisted of students from various universities in Central Java. These students, who

were included in the sample, had to meet certain inclusion and exclusion criteria. The inclusion criteria were as follows: students who were actively enrolled in universities in Central Java and students willing to participate as respondents, as demonstrated by their signing of respondent consent forms. The sample size for this research was set at 250 respondents. The sample selection technique in universities in Central Java was conducted using purposive sampling.

The research variables comprised two categories: independent and dependent variables. The independent variables included perceived usefulness, perceived ease of use, perceived trust, and perceived security and risk, examined from the perspective of the Technology Acceptance Model (Gardner & Amoroso, 2004). The dependent variable was student satisfaction, assessed in terms of performance, distinctive features, reliability, compliance with specifications, durability, serviceability, aesthetics, and quality.

Quantitative analysis and statistical tests in this research were executed as follows. Univariate analysis was conducted for each research variable, including membership status, socio-demographic characteristics, factors of perceived usefulness, perceived ease of use, perceived trust, and perceived security and risk as viewed through the TAM approach, and student satisfaction based on performance, distinctive features, reliability, compliance, durability, serviceability, aesthetics, and quality. Data were analyzed using descriptive statistics to present the results in the form of frequency distribution tables, including proportions or percentages (%) for each variable, supplemented with narratives to elucidate the generated tables. Bivariate analysis aimed to evaluate the factors that influenced student satisfaction with the utilization of digital payment using the TAM approach among students in universities in Central Java, employing linear regression statistical tests.

3. Results and Discussion

In this study, we profiled 250 respondents who participated by completing a questionnaire distributed to university students in Central Java. A majority of the respondents were female, comprising 81.0% of the sample (See Table 1), and a substantial portion were below the age of 20, accounting for 97.0% of the total (See Table 2).

Table 1. Respondents Demographic Data Based on Gender

Gender	Number of Respondents	Percentage (%)
Female	202	81
Male	48	19
Total	250	100

Table 2. Respondents Demographic Data Based on Age

Gender	Number of Respondents	Percentage (%)
Below 20	242	97
20 and above	8	3
Total	250	100

Validity tests indicate that all variables in the study have a coefficient of correlation with the aggregate scores of all items in the questionnaire greater than 0.30. This suggests that the individual statements in the research instrument are valid. To assess reliability, Cronbach's

Alpha was calculated; an instrument is deemed reliable if the Cronbach's Alpha value exceeds 0.60. All three research instruments in this study had Cronbach's Alpha coefficients greater than 0.60, thereby confirming their reliability for the purpose of this research.

Furthermore, this study conducted classic assumption tests to ensure that the results obtained satisfy the basic assumptions underlying regression analysis. The classic assumption tests performed were normality tests, multicollinearity tests, and heteroskedasticity tests. These were executed with the aid of SPSS 18.0 software, yielding a Kolmogorov-Smirnov (K-S) value of 0.070 and an Asymptotic Significance (2-tailed) value of 0.110. These results indicate that the regression equation model is normally distributed, as the Asymptotic Significance (2-tailed) value of 0.110 is greater than the alpha value of 0.05.

In terms of multicollinearity, the tolerance and Variance Inflation Factor (VIF) values for the variables—perceived usefulness, perceived ease of use, perceived trust, and perceived security and risk—were analyzed. The results show that the tolerance values for each variable exceeded 10%, and the VIF values were less than 10, suggesting that the regression model is free from multicollinearity. Additionally, the significance values for the variables perceived usefulness, perceived ease of use, perceived trust, and perceived security and risk were 0.649, 0.978, 0.199, and 0.122, respectively. As these values are greater than 0.05, it can be inferred that there is no influence of the independent variables on the absolute residuals. Consequently, the constructed model does not exhibit signs of heteroskedasticity.

Based on the analyzed model, a collective examination was performed using an F-test, which resulted in an F-statistic of 35.809 with a significance level (p-value) of 0.000. With a predetermined significance level (α) of 5 percent and a p-value of $0.000 < \alpha$ (0.05), the null hypothesis (H_0) is rejected in favor of the alternative hypothesis (H_1). This indicates that the variables "perceived usefulness", "perceived ease of use", "perceived trust", and "perceived security and risk" significantly influence the students' satisfaction with the use of digital payment. The total determination value of 0.601 means that 60.1% of the variance in satisfaction is explained by the variance in "perceived usefulness", "perceived ease of use", "perceived trust", and "perceived security and risk", while the remaining 39.9% is due to other unmodeled factors.

Each independent variable (X) was partially tested using a t-test to determine its impact on the dependent variable (Y). This test was performed to determine the individual significance of the influence of each independent variable on the dependent variable. Referring to Table 7, the coefficient for "perceived usefulness" (b_1) is 0.403 with a significance level of 0.000, which is less than α ($0.000 < 0.05$). This result suggests that "perceived ease of use" does not have a significant partial effect on student satisfaction. Similarly, the coefficient for "perceived trust" (b_3) is 0.370 with a significance level of 0.004, which is less than α ($0.004 < 0.05$). This result indicates that "perceived safety and risk" also does not have a significant partial effect on student satisfaction.

The F-test is used as the primary step in determining if the estimated regression model is valid, following the criteria similar to that of a One-Way ANOVA. The results from the aforementioned F-test indicate an intergroup value (comparator) of 4, an intragroup value (denominator) of 95, and an alpha value of 0.05. The tabulated F value is $F_{0.05}(4,95) = 3.25$, whereas the calculated F value is 35.809. With a significance level of $0.000 < 0.05$, the F-calculated value exceeds the F-tabulated value. The constructed model is deemed reliable for

interpretation as the null hypothesis (H0) is rejected at the 0.05 significance level, and the alternative hypothesis (H1) is accepted.

Accordingly, the data analysis results indicate that "perceived usefulness" positively impacts student satisfaction when employing Digital Payment. This is due to the benefits of digital payment in financial transactions, resulting in faster and more efficient transactions. When users recognize the utility of digital payment methods, their satisfaction levels increase. This result is consistent with Ing, Wong, & Lim (2021) Kim et al, (2015), Karim et al, (2020) prior research, which shows a positive correlation between "perceived usefulness" and satisfaction. Likewise, Purba, Samsir, & Arifin (2020) identified a positive association between perceived benefit and satisfaction, suggesting that understanding the usefulness of new technology enhances user satisfaction. The identical research further maintains that "perceived usefulness" plays a crucial role in impacting customer contentment with electronic transactions.

The analysis results further indicate that "perceived trust" has a positive impact on student satisfaction with the use of Digital Payment. This is because trust is a crucial factor in establishing a relationship between companies and customers, encompassing credibility and honesty (Al Hafizh & Hidayat, 2022; Wiwoho, 2019). Credibility is founded on the belief in a partner's competence to perform tasks effectively and reliably, while honesty pertains to the belief that a partner's intentions and motivations will yield mutual benefits and avoid actions with negative or detrimental consequences. In the realm of digital payment, reputation and trust are key determinants of whether consumers continue to use a service. This finding concurs with the research by Prasasti & Nuari (2021), which suggests a significant influence of perceived trust on consumer satisfaction when using OVO. Thus, higher trust levels among OVO users lead to increased satisfaction (Prasasti et al., 2021). Respondents also mentioned that OVO consistently responds promptly to their concerns, acknowledging the frequent errors or information discrepancies that may arise during online transactions. Consequently, OVO offers customer service to address inquiries and complaints, further bolstering trust. This aligns with research by Amalia (2018), Fathonah Huda, and Kristin (2021), which identified a positive and significant influence of trust on consumer satisfaction. In this context, OVO excels in managing the uncertainties, anonymity, limited control, and potential opportunistic behaviors associated with online shopping, instilling trust among consumers, and ultimately impacting their satisfaction. The results of this study illustrate that trust significantly influences satisfaction. Trust is seen as a commitment by OVO users to ensure consumer satisfaction aligns with expectations. Trust is not something instantly granted but rather emerges when users feel satisfied. It is considered a transaction that materializes consumer satisfaction and offers advantages to OVO users. This notion is reinforced by the findings of Chelvarayan, Yeo, Hui Yi, and Hashim (2022).

4. Conclusion

The findings indicate that the "Perceived Usefulness" has a positive and significant influence on student satisfaction regarding the use of digital payments, as approached by the Technology Acceptance Model, at various universities in Central Java. However, "Perceived Ease of Use" does not significantly affect student satisfaction in higher education institutions in Central Java. Additionally, "Perceived Trust" has been found to have a positive and significant influence on student satisfaction. In contrast, the combined factors of "Perceived Security" and "Perceived Risk" do not significantly impact student satisfaction in this context. Collectively, the factors of perceived usefulness, ease of use, trust, security, and risk influence student satisfaction when using digital payments.

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