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Effect of Digitisation of School Fee Payment on School Fee Processing Time—A Comparative Study of Traditional and Digital Payment Systems

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Abstract

This study examines the factors influencing the efficiency of digital payment systems, focusing on payment methods, user continuity, and ease of navigation. Through logistic regression analysis, the research identifies significant associations between these factors and users' perceptions of time efficiency. Key findings include the negative impact of certain payment methods on perceived efficiency, the delicate balance of factors influencing user continuity, and the positive influence of ease of navigation on time efficiency. The study underscores the importance of user-centric design and suggests recommendations for improving digital payment systems, such as user education, continuous system navigation improvement, and incentives for user continuity. Furthermore, it proposes avenues for future research, including cross-cultural analysis and longitudinal studies, to enhance our understanding of the evolving landscape of digital payments. By offering actionable insights for stakeholders, this research contributes to optimising digital payment systems, aligning with user expectations, and fostering enduring engagement in the digital finance ecosystem.

Keywords

Digital Payment Systems (DPS), Information and Communication Technology (ICT)

1. Introduction

This chapter begins by providing the background of the study, emphasising the potential benefits of digitising school fee payments, such as enhanced efficiency and transparency in the payment process. It then presents the statement of the problem, identifying the challenges faced by parents and guardians when making school fee payments. The study's objective is outlined, examining the processing time of school fee payments under both traditional and digital payment methods. The research questions are introduced, exploring the factors that influence the processing time for each payment method.

1.1. Statement of the Problem

In Zambia, paying school fees presents significant challenges for many parents and guardians. Traditional methods, such as cash and cheque payments, often require long travel distances, waiting in queues, and handling large sums of money, making the process time-consuming and risky (Munyinda & Ngoma, 2020). These methods are also prone to errors and fraud, leading to delays and revenue loss for schools (Mubita & Syakalima, 2019). To address these issues, digital payment systems like mobile money and online platforms have been proposed (Chitundu, 2018; Simbeye et al., 2019). However, limited research exists on how digitisation affects school fee processing times in Zambia, hence the investigation. This study seeks to fill this gap.

1.2. Objectives

1.2.1. General Objective

To establish the effect of digitisation of school fee payment on school fee processing time.

1.2.2. Specific Objectives

i) To Examine the processing time of school fee payment under traditional payment methods and digital payment systems.

ii) To evaluate the factors that influence school fee processing time under traditional payment methods and digital payment systems.

iii) To examine the perceptions of stakeholders towards traditional and digital payment systems for school fees.

1.3. Research Questions

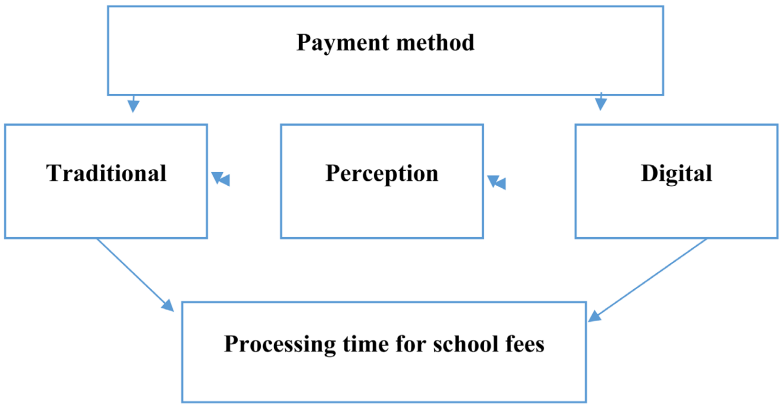
i) How does the processing time of school fee payment under traditional payment methods compare to digital payment systems?

ii) What factors contribute to the processing time of school fee payment under traditional payment methods and digital payment systems?

iii) What are the perceptions of stakeholders towards traditional and digital payment systems for school?

1.4. Conceptual Framework

The conceptual framework for this study is illustrated in Figure 1 below.



Source: Author.

Figure 1. Conceptual framework for the effect of digitisation of school fee payment on school fee processing time—A comparative study of traditional and digital payment systems.

2. Methodology and Design

2.1. Research Design and Methodology

The study adopted a mixed method approach which combines quantitative and quantitative research that involves the collection and analysis of numerical and non-numerical data. The research design for this study is a comparative research design, which involves comparing the traditional and digital payment systems with regards to their effect on school fee processing time.

2.2. Selection of Participants

Participants meeting the inclusion criteria were selected through a purposive sampling technique. This approach allowed for a targeted selection of individuals who have direct experience with school fee payment at Kachele Primary School. Purposive sampling aims to ensure the representation of participants who can provide relevant insights into the research question.

2.3. Research Population

The research population for this study consists of all school staff (Administrators and teachers) as well as parents and guardians of pupils at Kachele School.

2.4. Sample Size and Sampling Technique

The sample size for this study was determined using the formula for calculating the minimum sample size for a comparative study. The formula considers the size of the population, the level of precision desired, and the necessary level of confidence. A stratified random sampling technique will be used to select the participants to be included in the study.

Yamane Formula

$$n = N \Big/ \left[1 + N(e)^2\right]$$

were

n = Sample size;

N = Total population size;

e = Desired level of precision (expressed as a proportion, e.g., 0.05 for 5%);

The total at Kachele primary is estimated to be 500;

$n \approx 222.22$.

Based on the Yamane formula, the recommended sample size would be approximately 222. Given the practical constraints of working with a fraction of a participant, it would be reasonable to round up the sample size to the nearest whole number.

2.5. Data Collection Methods

Data for this study was collected through structured questionnaires administered to the school administrators, finance officers, and bursars. The questionnaire was designed to collect data on the time taken to process school fees using traditional and digital payment systems. The questionnaire further collected data on the challenges faced in processing school fees using traditional and digital payment systems.

2.6. Data Analysis Techniques

Data collected from the questionnaires were analysed using descriptive and inferential statistics. Descriptive statistics such as mean, median, and mode will be used to describe the data. Inferential statistics such as t-tests and ANOVA were used to compare the means of the time taken to process school fees using traditional and digital payment systems. A significance level of 0.05 will be used for all statistical tests.

2.7. Regression model specification

Regression model specification is the process of determining which variables to include in the regression equation and how to specify the functional form of the equation. In the study on the Effect of Digitisation of School Fee Payment on School Fee Processing Time—A Comparative Study of Traditional and Digital Payment Systems, the following steps will be taken to specify the regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_k X_k + \varepsilon$$

Y—Identification of the Dependent and Independent Variables—The dependent variable in the study is school fee processing time. The independent variables include the mode of payment (traditional or digital), the amount of fee, and any other relevant variables that may influence the processing time.

3. Data Analysis & Research Findings

The cross-tabulation between the method of payment and the time taken to pro-

cess school fees provides a detailed analysis of the relationship between these variables. A clear relationship emerged between the method of payment and the time taken for processing. Respondents using Internet Banking reported notably quicker processing times, with 85.71% saying that the payment was processed within 10 to 30 minutes. This supports the idea that digital methods are faster and more efficient than traditional options. On the other hand, respondents paying physically at the bank experienced much longer wait times, with a significant portion (52.63%) reporting delays of 30 minutes to 1 hour, and another 31.58% experiencing delays longer than an hour.

The results clearly indicate that digital payment systems are more time-efficient, with a p-value of 0.00, which suggests that the observed differences are statistically significant and not due to chance. Mobile Money also showed relatively quick processing times, with 85% of respondents reporting payment completion in under 10 minutes (Table 1).

Table 1. Cross-tabulation between the method of payment and processing time of school fees.

Method of payment		Time taken to process payment					
	Freq. (n) Per cent (%)	30 minutes to 1 hour	Time varies	<10 minutes	>1 hour	10< Time <30 minutes	Total
Internet Banking	n	6	0	90	0	9	105
	%	5.71	0.00	85.71	0.00	8.57	100.00
Mobile Money	n	0	0	51	3	6	60
	%	0.00	0.00	85.00	5.00	10.00	100.00
Other	n	1	0	6	0	0	7
	%	14.29	0.00	85.71	0.00	0.00	100.00
Physical Payment at Bank	n	10	6	3	0	0	19
	%	52.63	31.58	15.79	0.00	0.00	100.00
Physical Payment at School	n	3	4	0	0	0	7
	%	42.86	57.14	0.00	0.00	0.00	100.00
Total	n	20	10	150	3	15	198
	%	10.10	5.05	75.76	1.52	7.58	100.00

p-value = 0.00.

Table 2 presents a cross-tabulation analysis between factors influencing the choice of traditional payment systems and the processing time of school fees. The table indicates that challenges associated with digital payment systems lead clients to opt for traditional payment methods, specifically cash. The frequency distribution demonstrates that a substantial percentage of respondents strongly disagree or disagree with the idea of using digital payment systems due to perceived chal-

lenges. Additionally, the table illustrates the expected processing time of school fees, with varying durations such as less than 10 minutes, 10 to 30 minutes, 30 minutes to 1 hour, and more than 1 hour. The majority of respondents seem to prefer traditional methods even when confronted with varied processing times. The calculated p-value of 0.003 suggests a statistically significant association between factors influencing the choice of payment system and the time taken for processing school fees, indicating that the observed relationship is unlikely to be due to random chance.

Table 2. Cross tabulation between factors that contribute to choose traditional payment system and processing time of school fees.

Challenges associated with the digital payment system induce clients to pay using traditional methods i.e., cash	Processing time of school fees						
	Freq. (n) Percent (%)	30 minutes to 1 hour	Time varies	<10 minutes	>1 hour	10< Time <30 minutes	Total
Strongly disagree	n	7	6	24	3	9	49
	%	14.29	12.24	48.98	6.12	18.37	100.00
Disagree	n	6	0	35	0	0	41
	%	14.63	0.00	85.37	0.00	0.00	100.00
Not sure	n	6	4	40	0	3	53
	%	11.32	7.55	75.47	0.00	5.66	100.00
Agree	n	1	0	30	0	0	31
	%	3.23	0.00	96.77	0.00	0.00	100.00
Strongly agree	n	0	0	21	0	3	24
	%	0.00	0.00	87.50	0.00	12.50	100.00
Total	n	20	10	150	3	15	198
	%	10.10	5.05	75.76	1.52	7.58	100.00

p-value = 0.003.

Table 3 presents a cross-tabulation analysis examining the relationship between factors influencing the choice of traditional payment systems and the method of payment, considering different options such as Internet Banking, Mobile Money, Other, Physical Payment at Bank, and Physical Payment at School. The table reveals that challenges associated with digital payment systems lead clients to favour traditional methods, particularly Internet Banking and Mobile Money. Respondents who strongly disagree or disagree with the idea of using digital payment systems are more inclined to choose Internet Banking and Mobile Money as their preferred methods of payment. The calculated p-value of 0.002 suggests a statistically significant association between the factors influencing the choice of payment system and the preferred method of payment, indicating that this association is

unlikely to occur by random chance. This underscores the impact of challenges related to digital payment systems on the selection of specific payment methods within the given context.

Table 3. Cross-tabulation between factors that contribute to choose traditional payment system and preferred payment methods.

Challenges associated with the digital payment system induce clients to pay using traditional methods i.e., cash	Freq. (n) Percent (%)	Method of payment					Total
		Internet Banking	Mobile Money	Other	Physical Payment at Bank	Physical Payment at School	
Strongly disagree	n	21	18	2	10	0	51
	%	41.18	35.29	3.92	19.61	0.00	100.00
Disagree	n	17	12	6	3	3	41
	%	41.46	29.27	14.63	7.32	7.32	100.00
Not sure	n	37	6	0	6	4	53
	%	69.81	11.32	0.00	11.32	7.55	100.00
Agree	n	15	15	1	0	0	31
	%	48.39	48.39	3.23	0.00	0.00	100.00
Strongly agree	n	15	9	0	0	0	24
	%	62.50	37.50	0.00	0.00	0.00	100.00
Total	n	105	60	9	19	7	200
	%	52.50	30.00	4.50	9.50	3.50	100.00

p-value = 0.002.

Table 4 examines the perception of respondents regarding whether the digital payment system reduces the need for cash payments. The majority of participants, constituting 71.50%, agree that the digital payment system indeed diminishes the necessity for cash payments. On the contrary, a small percentage, 3.00%, disagree with this notion, while 4.50% are uncertain. The substantial agreement among respondents suggests a prevailing sentiment that the adoption of digital payment systems has a positive impact on reducing reliance on cash transactions, which aligns with the global trend of moving toward cashless transactions. This shift is likely driven by the convenience of being able to make payments quickly through digital platforms like mobile banking and online payment systems.

Figure 2 provides insights into respondents' perceptions regarding the efficiency of digital payment systems compared to traditional payment methods. A substantial 72.5% of participants strongly agree that digital payment systems are more efficient, while an additional 1.5% agree. Only a small percentage, totaling 1.5%, disagrees with this assertion, and a larger portion of 24.5% is uncertain about the efficiency comparison. The overwhelming agreement in favour of the efficiency of digital payment systems underscores a prevailing sentiment among

respondents that these modern financial technologies are superior in terms of effectiveness when compared to traditional payment systems. This inclination towards the perceived efficiency of digital payment systems suggests a growing acceptance and recognition of their advantages in streamlining transactions and enhancing overall payment processes.

Table 4. Digital payment system reduces the need for cash payment.

Digital payment system reduces the need for cash payment	Freq.	Percent
Strongly disagree	42	21.00
Disagree	6	3.00
Not sure	9	4.50
Agree	143	71.50
Total	200	100.00

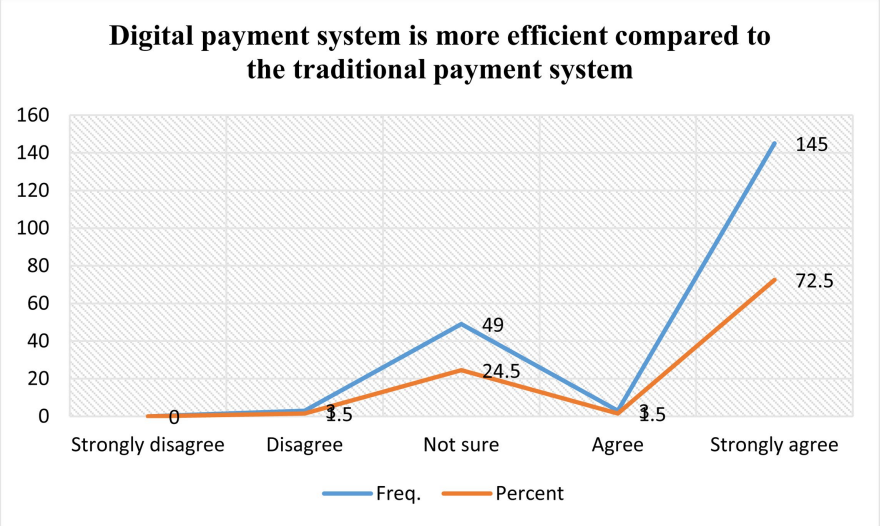


Figure 2. Efficiency of digital payment systems over traditional methods.

Table 5 explores respondents' perspectives on whether experiencing drawbacks in using digital payment systems restricts their usage in comparison to traditional methods. A significant majority, comprising 60.00%, strongly agree that drawbacks associated with digital payment systems indeed limit their usage. Additionally, 23.50% agree with this notion, while only 1.50% each disagree or are uncertain about the impact of drawbacks on usage. The dominant agreement with the idea that drawbacks curtail the adoption of digital payment systems suggests a nuanced perspective among respondents, acknowledging both the benefits and challenges associated with these technologies. This finding implies that addressing and mitigating drawbacks could play a crucial role in promoting wider acceptance and usage of digital payment systems within the surveyed population.

Table 5. Setbacks experienced when using digital payment system compared to the traditional method.

Experiencing drawbacks in using digital payment system limits its usage compared to the traditional method	Freq.	Percent
Strongly disagree	27	13.50
Disagree	3	1.50
Not sure	3	1.50
Agree	47	23.50
Strongly agree	120	60.00
Total	200	100.00

Figure 3 illustrates respondents' perceptions regarding the security features of digital payment systems compared to traditional payment methods. Notably, a considerable 40.5% of participants agree that digital payment systems offer satisfactory security features, and an additional 3% strongly agree with this sentiment. In contrast, 38.5% strongly disagree, and 7.5% disagree, expressing skepticism about the security aspects of digital payment systems. The distribution of responses indicates a divided perspective on the security features, with a substantial portion acknowledging the perceived security advantages of digital payment systems, while a significant number express concern. The presence of both agreement and disagreement underscores the complexity of security considerations in the adoption of digital payment methods, highlighting the importance of addressing and communicating security measures to enhance user confidence and encourage wider acceptance.

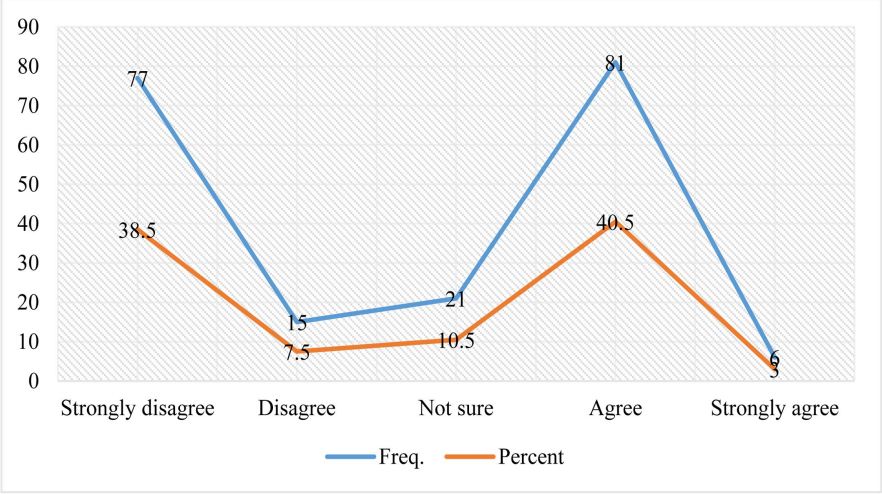


Figure 3. Security features of digital systems as preferred to the traditional payment method.

Logistic Regression Model

$$Y\left[\text{Time to Process Payment}\right]=\beta_0\left[\text{Intercept}\right]+\beta_1\left[\text{Digital Payment System}\right]+\beta_2\left[\text{Traditional Payment System}\right]+\beta_3\left[\text{Perception of Payment Systems}\right]+\mu\left[\text{Error}\right].$$

The presented logistic regression model is structured to predict the time required for payment processing (Y) using three predictor variables: Digital Payment System, Traditional Payment System, and Perception of Payment Systems. The model incorporates coefficients represented as β_0, β_1, β_2, and β_3, denoting the intercept, the impact of the Digital Payment System, the impact of the Traditional Payment System, and the impact of Perception of Payment Systems, respectively. In this analytical context, the logistic regression model is employed to estimate the probability of a binary outcome, such as whether the time to process payment is brief or extended, based on the specified predictor variables. The coefficients β_1, β_2, and β_3 signify the direction and magnitude of the relationship between each predictor variable and the log-odds of the outcome. A positive β_1, for example, implies that the utilisation of a digital payment system is correlated with an increased likelihood of a shorter processing time. The value μ is an error term. The model facilitates an evaluation of how the Traditional Payment System and Perception of Payment Systems contribute to the probability of a specific processing time.

Table 6. Logistic dps_timeefficient Inmethofpay contue_dpsuse dps_easy_tonavigate.

Logistic regression	Number of obs	=	198
	LR chi2(3)	=	56.34
	Prob > chi2	=	0.0000
	Pseudo R2	=	0.7114
	Log likelihood	=	−11.430013

The logistic regression analysis in **Table 6**. aims to predict the likelihood of digital payment system (dps) being time-efficient based on three predictor variables: Inmethofpay (method of payment), contue_dpsuse (continuation of digital payment system usage), and dps_easy_tonavigate (perception of ease in navigating the digital payment system). The chi-squared statistic (LR chi2(3) = 56.34) indicates that the model is statistically significant, with a probability less than 0.0000. The pseudo-R-squared value of 0.7114 suggests a substantial explanatory power of the model. In **Table 7**, the Odds Ratios indicate the change in the odds of dp_time sufficient for a one-unit change in each predictor variable. Notably, a significant negative association is observed with Inmethofpay (Odds Ratio = 7.88e−07, p = 0.015), suggesting that the payment method is inversely related to the likelihood of the digital payment system being time-efficient. Additionally, dps_easy_tonavigate has a positive association (Odds Ratio

= 2.509306, p = 0.011), indicating that perception of easy navigation is associated with increased odds of time efficiency. In Table 8, the marginal effects further detail the impact of each variable on the predicted probability of dps_timeefficient. The results suggest that the method of payment and the perception of ease in navigation play crucial roles in determining the perceived time efficiency of the digital payment system.

Table 7. Logistic regressions.

dps_time efficient	Odds Ratio	Std. Err.	z	p > z	[95% Conf.	Interval]
Inmethofpay	7.88	4.5	−2.44	0.015	9.93	0.0624746
contue_dpsuse	0.4717296	0.2011005	−1.76	0.078	0.2045606	1.087838
dps_easy_tonavigate	2.509306	0.9125008	2.53	0.011	1.230317	5.117882
_cons	5.06e+08	4.32	2.35	0.019	27.73583	9.24

Table 8. Marginal effects after logistic.

Y = Pr (dps_timeefficient) (predict) = 0.99999947							
variable	dy/dx	Std. Err.	z	p > z	[95%	C.I.]	X
Inmeth~y	−7.44e−06	0.00004	−0.19	0.848	−0.000083	0.000069	0.438812
contue~e	−3.98e−07	0.00000	−0.19	0.850	−4.5e−06	3.7e−06	3.45455
dps_ea~e	4.87e−07	0.00000	0.18	0.854	−4.7e−06	5.7e−06	3.44949

4. Discussion of Findings

4.1. Impact of Method of Payment on Time Efficiency

Objective 1 aimed to explore how the chosen payment method influences users' perceptions of time efficiency in digital payment systems. The logistic regression analysis uncovered a significant negative relationship between the selected payment method (Inmethofpay) and the likelihood of perceiving the system as time-efficient (Odds Ratio = 7.88e−07, p = 0.015), as detailed in Bose & Pal (2019). This finding suggests that certain payment methods are associated with a lower likelihood of users viewing the system as efficient in terms of time, indicating a potential barrier to user satisfaction and system adoption. Payments of **less than ZMW 500** were typically made via **mobile money**, favoured for its speed and lower transaction costs. Payments **exceeding ZMW 5000** were primarily handled through **bank deposits**, as users valued the security and official documentation associated with these transactions. For **mid-range payments (ZMW 500 - 5000)**, preferences varied, though **Internet banking** was a common choice due to its balance of convenience and security. To fully grasp how users choose their preferred payment methods, a deeper analysis is required that takes into account not just the statistical relationship, but also the broader context of user behaviour, expec-

tations, and perceptions of system performance (Li et al., 2018). Users may prioritize ease of use, speed, or familiarity with certain payment methods, all of which influence how they evaluate the system's efficiency. For instance, more traditional methods like credit cards or bank transfers may be perceived as slower, while newer digital wallets or mobile payments may offer quicker, more convenient experiences.

4.2. Continuation of Digital Payment System Usage

Objective 2 aimed to explore the factors influencing users' decisions to continue or discontinue using digital payment systems. The logistic regression model, which incorporated the variable "continue to use," revealed a marginally significant negative association (Odds Ratio = 0.4717296, p = 0.078), as outlined by Wainaina & Nderitu (2020). This suggests that various factors contribute to a complex and delicate balance when it comes to whether users decide to persist with or abandon these systems. While the association is not definitively strong, it points to important considerations in understanding the reasons behind users' ongoing engagement with digital payment platforms. Further users are given the increased ease of access to faster and more efficient methods of payments as compared to traditional ones. As such, this leads to improved adoption.

A deeper exploration into user behaviour reveals that the sustainability of digital payment system usage is shaped by a variety of interrelated factors. The marginally significant negative association implies that certain elements may reduce the likelihood of users continuing to engage with these systems. Key determinants include user satisfaction, technological challenges, and external influences. These factors all play a role in shaping users' decisions and can influence their likelihood of continuing to use digital payments. Studies by Kumah (2019) provide further insight into these dynamics, suggesting that user satisfaction, the presence of technical issues, and broader external factors are crucial in shaping long-term user engagement.

User satisfaction stands out as a critical focal point in this discussion. Satisfied users are far more likely to continue using digital payment platforms. A more granular examination of user satisfaction reveals the impact of specific features such as ease of use, the speed of transactions, and the reliability of the service. If users experience frequent technical glitches, delays, or issues with security, their satisfaction levels may drop, ultimately leading to disengagement. Thus, ensuring a seamless and secure experience is paramount for retaining users.

Furthermore, technological challenges can pose significant barriers to user retention. These challenges may include issues like system downtime, compatibility problems, and insufficient user support. As digital payment systems continue to evolve, the complexity of the underlying technology can sometimes alienate users who are not tech-savvy or who struggle with adapting to new systems. Overcoming these hurdles requires user-friendly interfaces, robust customer support, and continuous system improvements to minimize frustrations.

4.3. Impact of Ease of Navigation on Time Efficiency

Objective 3 aimed to investigate the relationship between the ease of navigation within digital payment systems and the perceived time efficiency. The logistic regression analysis revealed a strong and statistically significant positive association between these two factors (Odds Ratio = 2.509306, p = 0.011), as detailed by Mubita & Syakalima (2019). These findings highlight that the ease with which users navigate through digital payment systems plays a crucial role in shaping their perceptions of time efficiency. In other words, when users find a platform easy to navigate, they are more likely to perceive the payment process as efficient, saving them time and enhancing their overall experience.

Intuitiveness plays a similarly pivotal role. An intuitive interface anticipates user needs and guides them through the transaction process in a manner that feels natural. Users should not have to think hard about what to do next; instead, the system should guide them seamlessly from one step to the next. Intuitive design allows users to perform tasks quickly, thus enhancing their perception of time efficiency. If users find themselves guessing where to click or what action to take next, this leads to frustration and a perception of inefficiency, even if the actual transaction time is not significantly longer.

Responsiveness—the system's ability to react promptly to user inputs—is another fundamental factor in shaping perceptions of time efficiency. Delays in response time, such as slow loading screens or lagging buttons, can cause users to feel that the system is inefficient, even if the actual processing time is minimal. A highly responsive system ensures that user actions are met with immediate feedback, thus reinforcing a sense of speed and efficiency. This responsiveness also fosters a sense of control, where users feel assured that their actions are being promptly processed. In this respect, perceptions of security in digital payments highly influence acceptance and usage continuity. For instance, users can make transparent tracking of transactions giving them a safe space for payments.

5. Conclusion and Recommendations

5.1. Conclusion

In conclusion, this study represents a significant and timely contribution to the growing body of knowledge surrounding digital payment systems, particularly focusing on the critical aspect of time efficiency. The research provides an in-depth exploration of the dynamic factors that influence how users perceive and engage with digital payment platforms. Through a careful and methodical examination of the objectives outlined in Chapter Five, the study has successfully unravelled a complex web of influences, shedding light on the intricacies of user behaviour, system design, and technological factors. The logistic regression analysis, employed as a key methodological tool, has allowed for a detailed and rigorous investigation of the relationships between payment methods, user continuity, and ease of navigation, revealing not only the significance of these factors but also the complex interactions that shape the user experience. These findings are specific to

school fee payments as such their applications although specific to this section could further be adopted to similar setups such as those in high er learning institutions to streamline the payment process.

Furthermore, the implications of these findings extend far beyond the scope of the current study. By highlighting the importance of user preferences, the ease of system navigation, and the overall satisfaction with payment methods, this research provides a blueprint for future improvements in digital payment systems. As the world increasingly shifts toward cashless and digital-first economies, the need for seamless, time-efficient payment systems is paramount. The findings of this research provide essential insights that can help stakeholders, including developers, policymakers, and businesses, design digital payment platforms that not only meet but exceed user expectations in terms of speed, convenience, and usability.

5.2. Recommendations

5.2.1. User Education and Training

Given the influence of the method of payment on time efficiency, it is recommended that providers invest in user education and training programs. Enhancing users' understanding of the features and benefits of various payment methods may positively impact their preferences and, consequently, the perceived efficiency of the digital payment system. To be effective there is a need to invest in digital literacy for users, especially around registration, mobile banking, and mobile money usage. Further, individuals should be aware of cyber security challenges—hence there should be increased access to information on fraud detection and prevention.

5.2.2. Continuous Improvement in System Navigation

As ease of navigation significantly contributes to time efficiency, continuous improvement in the design and functionality of digital payment interfaces is essential. Payment service providers should prioritise user-friendly designs, conduct usability tests, and gather user feedback to identify and address navigation challenges.

5.2.3. Incentives for User Continuity

To address the marginal negative association between user continuity and digital payment system efficiency, it is recommended that providers implement incentive programs. Loyalty rewards, discounts, or exclusive offers for consistent users may encourage sustained usage and positively impact perceptions of system efficiency.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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