Vol. 5 (Iss. 3) 2024, pp. 1221-1232 African Journal of Empirical Research https://ajernet.net ISSN 2709-2607

Perceived Financial Value and the Adoption of the Cashless Payment System in the Matatu Transport Sector in Nairobi County, Kenya

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ABSTRACT

Cashless payment systems have emerged as a transformative force in the global financial landscape, offering convenience and efficiency in transactions. Despite their widespread development, the adoption of these systems has been uneven, with only a select number of companies in specific countries making notable progress. This research investigated the correlation between perceived financial value and the adoption of cashless payment systems in Nairobi's Matatu sector. The central question was how perceived financial value influences this adoption. This research was grounded on institutional theory, the study used an explanatory research design with a target population of 1,176 Matatu SACCO managers and staff, from which a sample of 289 was selected using stratified and simple random sampling. Data was collected via a questionnaire, with validity assessed through Pearson Moment Correlation and reliability through the test-retest method. Quantitative analysis was conducted using SPSS. The findings revealed a significant impact of perceived financial value on cashless payment adoption ($\beta=0.534$, $t=10.744$, $p<0.05$) and a 67.9% positive correlation. The study concluded that a suitable legal and institutional framework is needed, requiring collaboration between the private and public sectors to support technological adoption among Matatu operators in Nairobi. In light of the study's findings, the researchers recommended that the lack of a suitable legal and institutional framework for e-payments necessitates a joint effort from both the private and public sectors to establish the necessary legal and institutional structures, thereby fostering an environment conducive to technology integration among Matatu operators in Nairobi and beyond.

Keywords: Adoption, Cashless Payment System, Matatu Transport Sector, Perceived Financial Value

I. INTRODUCTION

The evolution of payment systems has progressed significantly alongside technological advancements. Numerous studies have been conducted to assess the e-payment system (Bhuvana & Vasantha, 2017). In recent times, technological advancements have significantly transformed the way business is conducted. Cashless payment systems have been operational in Kenya since the 1970s, with early adoption as far back as the 1980s. During this period, public transportation was overseen by the government through the Kenya Bus Service, which issued paper tokens electronically generated with a magnetic strip. This innovation notably improved government revenue collection and was subsequently adopted by privately owned bus companies (Misango et al., 2016).

The paper token system of ticketing was later improved by some sector players such as Double M bus service and City Hoppa, according to Nyiendo and Munywoki (2014). However, this system did not gain widespread adoption among the 14-seater Matatu (passenger service vehicles). Nowadays, many users prefer making cashless payments rather than using physical currency. Hundreds of cashless payment systems have been developed to facilitate secure internet transactions (Maiyo, 2013).

Cashless payments involve financial transactions where consumers make payments without using physical cash (Bilińska-Reformat & Kieżel, 2016), mainly using cards or electronic methods. This system allows bills to be paid directly from bank accounts, without the account holder being present at the bank, and without the need to write and mail checks (Bhuvana & Vasantha, 2017). Cashless payment systems are utilized more extensively in some countries such as the Netherlands, Germany, and notably in the Scandinavian countries (Sreenu, 2020 Rahman et al., 2020)

Perceived customer value addition includes the benefits and experiences customers recognize from a product (Hayashi, 2012). In online technology, it refers to the value received relative to costs, based on the technology's effectiveness (Varki & Colgate 2001; Nirmawan & Astiwardhani, 2021). Perceived usefulness relates to users' expectations of improved job performance (Davis, 1986), while usability measures how well technology helps users complete tasks (Madan & Yadav, 2016; Natarajan et al., 2017). Barbuta et al. (2012) found that perceived customer value, security, and scalability affect merchants' adoption of mobile wallets. In contrast, Schierz et al. (2010) and Ramos

de Luna et al. (2019) showed that perceived ease of use, usefulness, and behavioral intention drive technology engagement.

The 2018 World Payments Report noted a 14% increase in global cashless transactions from 2018 to 2019, totaling 708.5 billion transactions—the highest growth rate in a decade. Projections indicated a global compound annual growth rate (CAGR) of 10.9% for cashless transactions from 2015 to 2020, with emerging Asia expected to see an even higher CAGR of 30.9% due to digital innovation and increased adoption of digital payments for financial inclusion. (Research and Market, 2020).

In Africa, inadequate payment systems have created significant challenges in the transport sector, leading to financial losses, inefficiencies, increased crime from cash transactions, and widespread corruption. In the Matatu industry, corruption is estimated to cause daily losses of nearly Ksh. 30 million (Okebiro, 2016). The Cashless Payment System introduced in Kenya in November 2014, intended for implementation by July 1, 2015, was expected to transform public transport by offering commuters better time management, regulated costs, and improved service quality by reducing issues with lost tickets and dishonest conductors.

Legal Notice No. 219, issued under The National Transport and Safety Authority Act on December 17, 2013, mandates that all licensed public service vehicle operators provide tickets or receipts and implement a cashless fare system by July 1, 2014. However, this requirement has not been enforced, and cash payments remain common in Kenya's public transport. The cashless system appears to have been rushed without thorough evaluation. Currently, three companies are piloting cashless payment solutions: MY 1963 Jinice (MOA), Beba Pay (Equity Bank and Google), and Abiria Card (Kenya Bus Service and Kenya Commercial Bank).

1.1 Statement of the Problem

In Kenya, estimates suggest that the Matatu industry employs over 500,000 people and contributes up to 5% of the country's GDP. Producers and consumers make economic decisions on products, markets, costs, locations, and prices, which are based on transport services, availability, costs, capacity, and reliability (Cidell, 2015). The cashless payment system is not fully developed, yet it is predicted to rise to 30 percent of the country's revenue (Misango et al., 2016). Some of the challenges include a lack of buy-in from the operators mainly the drivers and conductors. Secondly is the lack of interoperability of the systems. The lack of ease of use of cashless payment system platforms with different payment cards (credit cards, debit cards, and other forms of smart cards) is likely to hinder the seamless operation of the cashless payment system (Lubanga et al., 2017).

Despite all the benefits of a payment system, its adoption is very low among firms and consumers alike, and cash still prevails. Given the supposed benefits of cashless payments, a natural question arises: why has there not been a more widespread shift to cashless payment usage? A potential explanation for low adoption among firms is that there are "supply-side" barriers that serve as binding constraints, inhibiting the adoption of cashless payments (Ligon *et al.*, 2019). Therefore, there is a need to explore the effect of perceived financial value on the adoption of a cashless payment system in the Matatu sector in Nairobi County, Kenya.

1.2 Research Objective

The objective of the study was to establish the effect of perceived financial value on the adoption of a cashless payment system in the Matatu sector in Nairobi County.

1.3 Study Hypotheses

H_{01}**:** Perceived financial value does not affect the adoption of the cashless payment system in the Matatu sector in Nairobi County

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Institutional Theory

The research is based on Meyer and Rowan (1977). Institutional Theory, as discussed by Kinyua et al. (2015) and Maika and Wachira (2020). This framework provides insights into the interactions between organizations and their environments, emphasizing social rules, norms, and values that pressure organizations, prioritizing legitimacy over efficiency (Scott & Scott, 2004). The environment includes regulatory bodies, government agencies, and societal values. While institutional theory suggests organizations align with their environments, it inadequately addresses critical aspects such as reliance on external resources and the ability to adapt to or influence the environment, complicating its application to credit reference bureaus (Scott & Scott, 2004).

Institutional context greatly influences the formation of formal structures in organizations, often more than market dynamics. Early adopters of innovative frameworks that improve technical efficiency gain legitimacy, leading

to widespread acceptance where failure to adopt these innovations is seen as irrational or even legally required. As a result, both new and established organizations implement these structures, regardless of their actual efficiency benefits.

This research uses institutional theory to explore the evolution of the cashless payment system in the Matatu sector, highlighting the interactions between organizations and their environments, particularly the social rules, norms, and values that pressure organizations.

2.2 Empirical Review

A recent study on cashless payment systems has revealed many aspects that affect their acceptance, utilization, and consequences in diverse settings and areas. In their study, Wang et al. (2022) investigated the impact of the perceived value of cashless payments on consumers' inclination to utilize these systems, particularly concerning the practice of physical distancing. The researchers found that the way people perceive the value of something has a favorable effect on their intention to use it. They also found that psychological safety plays a role in mediating this link. Furthermore, they discovered that trust tendencies amplify the impact of perceived value on psychological safety, suggesting that trust plays a crucial role in the acceptance of cashless payments. Oyelami et al. (2020) conducted a study in Nigeria to examine the factors that drive the adoption of electronic payment methods and how they affect consumer purchasing. Their research found that variables such as ease, security, trust, and social influence play a key role in motivating people to use electronic payment methods. Researchers discovered that these variables account for over 50% of the factors influencing customers' decisions to use cashless payment systems. The study also emphasized that electronic payments have a beneficial impact on consumer spending, indicating that the implementation of these systems can result in higher expenditures. Karjaluoto et al. (2020) formulated and validated a theoretical framework that integrates the updated Unified Theory of Acceptance and Use of Technology (UTAUT2) with a consumer brand engagement (CBE) model. The purpose of this framework was to forecast individuals' intentions to use contactless payment methods in Finland. Their analysis demonstrated that habit and overall happiness were the most influential factors in predicting usage intention, explaining approximately 70% of the variability in customer behavior. This discovery emphasizes the importance of consistent usage and contentment in promoting the acceptance of contactless payment technologies.

Misango et al. (2016) conducted a study that specifically examined how knowledge and competency impact the adoption of cashless payment systems in passenger service vehicles in Nairobi. The study revealed a favorable association between knowledge and competence; however, it did not find a significant impact of these factors on adoption. This implies that more extensive public education and enhanced network systems may be required to achieve higher rates of adoption.

Misango (2017) conducted another study in Nairobi to investigate how the scale of the sector affects the use of cashless payment technologies in passenger service vehicles. The study did not find a significant impact of industry size on the rate of adoption. However, the highlighted obstacles include inadequate network infrastructure, defective devices, and the absence of standardized adoption frameworks. Suggestions encompassed increasing IT networks, standardizing smart cards across various means of transportation, and augmenting public awareness.

Rahman et al. (2020) conducted a study in Malaysia where they employed the UTAUT2 model to examine the determinants of cashless payment uptake. Their study revealed that performance expectancy and facilitating conditions are the primary factors that have a strong influence, while security also plays a significant role. The researchers discovered that hedonic motivation, social influence, and innovativeness had a positive correlation with the adoption of cashless payments. This emphasizes the intricate interaction of several elements that influence payment method adoption.

Jumba and Wepukhulu (2019) investigated the impact of cashless transactions on the financial performance of supermarkets in Nairobi County. Their study focused on the accessibility of financial services, the introduction of new ideas, currency handling methods, and transaction expenses. The findings revealed that the use of cashless payments had a favorable effect on financial performance. This suggests that implementing cashless payment systems can improve financial results for enterprises.

Dotzauer and Haiss (2017) conducted a study on the obstacles that hinder the acceptance of mobile payments in Germany. They found that tradition, risk, and value are the main barriers to its implementation. The researchers also observed that the age and smartphone usage behavior of individuals influenced their willingness to adopt innovations. This highlights the significant challenge of innovation resistance among German consumers. Yang et al. (2021) investigated e-wallet adoption using the Unified Theory of Acceptance and Use of Technology (UTAUT). The study revealed that factors such as perceived usefulness, simplicity of use, social influence, lifestyle compatibility, and trust played a major role in predicting both the intention to use and the adoption of e-wallets. The study also emphasized the mediating function of usage intention in the correlation between these variables and e-wallet adoption.

Moghavvemi et al. (2021) conducted a study on Malaysian retailers, highlighting that the main drivers for adopting mobile payment are the benefits of decreased processing time and costs. However, obstacles such as the lack of compatibility between technologies and the high costs associated with investments were also significant difficulties.

Khan and Ali (2018) employed structural equation modeling and neural network approaches to examine the uptake of mobile payments among retailers in India. The researchers determined that external pressure and relative advantage were the most influential aspects of the adoption process. This information could be useful to payment providers when devising effective tactics. Abebe and Lessa (2020) conducted a study to investigate the adoption of mobile payment systems in Ethiopia. The researchers discovered that the characteristics of relative benefit, ease of use, and trust played a key role in influencing the adoption of these systems. They put up a conceptual model to guide future research and practice in this field.

The reviewed literature reveals that despite a thorough investigation of cashless payment systems, notable deficiencies persist. Research on the acceptance of new technologies and the impact of cultural and regional differences on payment habits in diverse situations is lacking. Furthermore, there is a lack of research on the long-term impact of adoption on financial inclusion and economic growth. Subsequent investigations should prioritize these areas that have received insufficient attention to attain a more thorough comprehension of cashless payment systems.

III. METHODOLOGY

The study adopted an explanatory research design. This method's goal is to find the why and what of an object of study (Asenahabi, 2019). Explanatory research is responsible for finding the why of the events by establishing cause-effect relationships. The target population for this study was Matatu SACCO managers and staff in Nairobi County. There were 147 registered Matatu SACCOs in Nairobi County. The target population was 1176 respondents composed of 147 Matatu SACCO managers and 1129 staff as each Matatu SACCO had an average of 7 employees and a manager giving a total of 8 staff per SACCO. The data for the study was collected using a self-administered questionnaire and ranking cases from 1 to 5. 1 being Strongly Disagree, Disagree, Fairly Agree, Agree, and Strongly Agree respectively. The sample size of the study was calculated using the formula as recommended by Fishers (1935). A sample of 289 respondents was arrived at. Stratified followed by random sampling was used to select 36 Matatu SACCO managers and 253 Matatu SACCO staff. To achieve the objective of the study, the researchers used quantitative analysis. Quantitative data was analyzed using descriptive statistics and inferential statistics with the help of Statistical Package for Social Sciences (SPSS). The researcher used regression analysis to establish the association between the perceived financial value and the adoption of a cashless payment system. The following analytical model was used in analyzing the relationship between the dependent and independent variables:

$Y = B_0 + B_1X_1 + e$

Where:

Y – Adoption of a cashless payment system

X_1- Perceived financial value

B - Independent Variable Coefficients

e - Error term

Reliability and validity tests were performed on the data collection instrument. Quantitative data was analyzed and presented in the form of tables, frequencies, and percentages. The researchers took into consideration the various ethical considerations commonly undertaken by researchers during research. The researcher ensured that relevant institutions related to the study provide explicit written authority to undertake this study such as the National Commission for Science, Technology and Innovation (NACOSTI) and the Nairobi County Director of Education to conduct the study. Before administering the research instruments, the researcher also sought permission from the respondents. In this research, the principles of ethics were adhered to to ensure the preservation of the respondent's dignity and emotions when asking probing questions. This addressed the respect for the informant(Pierce et al., 2019)

IV. FINDINGS & DISCUSSION

4.1 Response Rate

The study sampled and issued questionnaires to 289 respondents and the data was collected from 289 respondents. This represented a 100.0% response rate which was judged as very sufficient to offer analysis for the study.

4.2 Demographic Information of the Respondents

The study sought to determine the employees' gender, age, level of education, and work experience. The study results were as follows**:**

Table 1
Demographic Information of the Respondents

Gender	**Frequency**	**Percentage (%)**
Male	139	48.2
Female	150	51.8
Total	289	100
Age		
18-25 years	73	25.2
26-35 years	83	28.8
36-45 years	75	25.9
Over 45 years	58	20.1
Total	289	100
Category of Staff		
Operational	36	12.5
Managerial	253	87.5
Total	289	100
Work Experience		
Below 5 years	44	15.1
6-10 years	35	12.2
11-15 years	121	41.7
Above 16 years	89	30.9
Total	289	100
Level of Education		
Degree	152	52.5
Diploma	79	27.3
Certificate	35	12.2
Primary education	23	7.9
Total	289	100
Marital Status		
Single	93	32.2
Married	187	64.7
Widowed	6	2.1
Separated	3	1.0
Total	**289**	**100**

The research findings regarding gender distribution revealed that 48.2% of the participants were male, while 51.8% were female. This distribution suggests that the study effectively mitigated potential gender bias by incorporating data from all gender identities, thereby ensuring that the collected data accurately reflected the perspectives of both males and females, resulting in a balanced representation without significant disparities in percentage composition.

The analysis of the respondents' ages indicated that 25.2% fell within the 18-25 age range, 28.8% were aged 26-35, 25.9% were between 36-45 years, and 20.1% were over 45 years. This distribution suggests that a significant portion of the respondents were young adults aged 18-25, indicating a relatively inexperienced workforce. However, the data collection encompassed a diverse range of age groups, ensuring that the opinions gathered represented a comprehensive spectrum of age demographics.

The findings concerning the respondents' work experience indicated that 15.1% had between 1-5 years of experience, 12.1% had 6-10 years, 41.7% had 11-15 years, and 30.9% had over 16 years of experience. This suggests that a substantial majority of respondents had more than a decade of experience in their roles. Such a trend indicates a high level of employee retention, which is crucial for maintaining a workforce that is both competent and experienced, thereby facilitating effective service delivery to the public. The data collected spanned various levels of experience, allowing for a rich diversity of opinions that accurately reflected the realities of the Matatu sector without bias from tenure.

The educational background of the respondents showed that 7.9% had completed primary education, 52.5% held bachelor's degrees, 27.3% possessed diplomas, and 12.2% had certificates. This distribution indicates that the Matatu sector employs a workforce with a significant level of educational attainment, which is essential for ensuring high-quality service delivery.

The study further sought to determine whether the Matatu Sacco's used a cashless payment system. The study results are presented in Figure 1

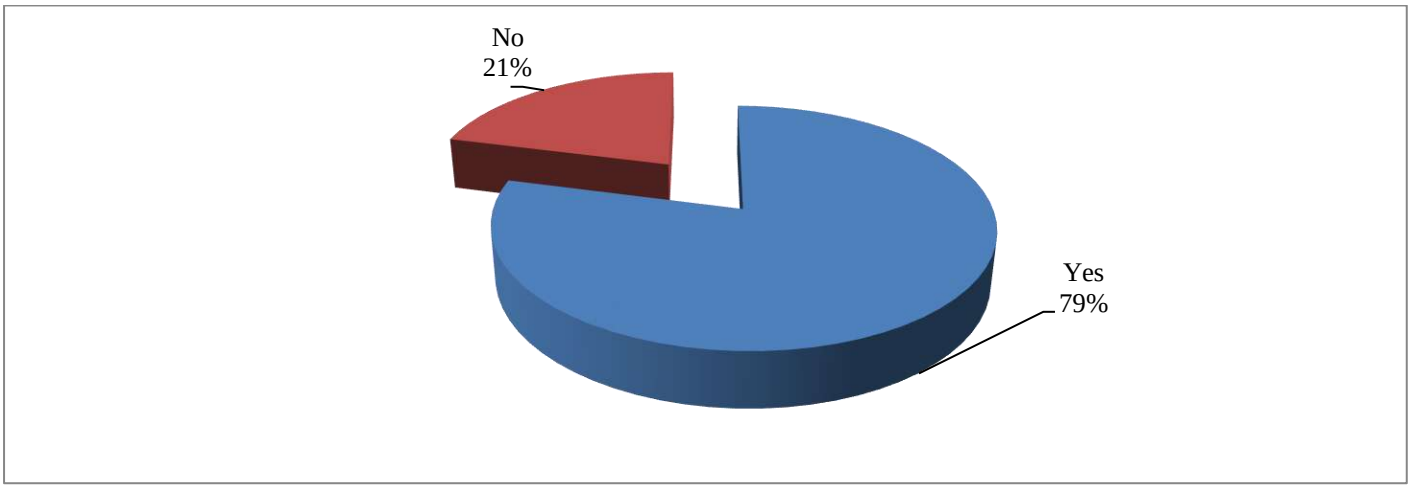

Figure 2
Use of a Cashless Payment System

The study results revealed that 79.0% of the respondents agreed that they used a cashless payment system as compared to 21.0% who said that they didn't use a cashless payment system.

4.3 Descriptive Statistics for Perceived Financial Value

The study sought to determine the effect of perceived financial value on the adoption of a cashless payment system in the Matatu sector. The study responses were as in Table 2.

Table 2
Perceived Financial Value

Statements		SD	D	FA	A	SA	Total	Mean	Std. Dev.
The prestige of the cashless payment system	F	0	0	31	77	181	289	4.52	1.165
	%	0	0	10.8	26.6	62.6	100	90.4	
Reduction in errors made in payments and receipts	F	0	0	31	77	181	289	4.51	0.275
	%	0	0	10.8	26.6	62.6	100	90.2	
Improved revenue collection under cashless payment	F	0	0	31	85	173	289	4.48	0.450
	%	0	0	10.8	29.5	59.7	100	89.6	
Maximization of collecting cash from passengers	F	0	8	25	133	123	289	4.28	0.273
	%	0	2.9	8.6	46	42.4	100	85.6	
Control of cash received is enhanced hence adoption	F	0	8	25	133	123	289	4.28	0.236
	%	0	2.9	8.6	46	42.4	100	85.6	

Standard deviation represents how likely a data point is to vary a certain amount from the average in a dataset. The values of SD were not wide hence there was minimal variation in the means. The study results on the effect of perceived financial value on the adoption of a cashless payment system indicated that 90.4% (mean=4.52) thought that the prestige of a cashless payment system, 90.2% (mean=4.51) believed that reduction in errors made in payments and receipts, 89.6% (mean=4.48) believed that improved revenue collection under cashless payment, 85.6% (mean=4.28) thought that maximization of collecting cash from passengers, and that 85.6% (mean=4.28) believed that control of cash received is enhanced hence adoption.

4.4 Descriptive Statistics for Adoption of Cashless Payment System

The study finally sought to determine the indicators of the adoption of a cashless payment system in the Matatu sector. The study results were tabulated in Table 3.

Table 3

Descriptive Statistics for Adoption of Cashless Payment System and Performance

Statements		SD	D	FA	A	SA	Total	Mean	Std Dev
Use of phone calls	F	0	8	25	133	123	289	4.49	0.606
	%	0	2.9	8.6	46	42.4	100	89.8	
Utilization of mobile money till numbers and pay bill accounts	F	0	0	35	98	156	289	4.52	1.446
	%	0	0	12.2	33.8	54	100	90.4	
Use of mobile phone payment apps	F	0	0	10	98	181	289	4.28	0.860
	%	0	0	3.6	33.8	62.6	100	85.6	
Use of virtual bookings	F	0	0	10	98	181	289	4.49	0.936
	%	0	0	3.6	33.8	62.6	100	89.8	
Payments via debit and smart cards	F	0	0	31	96	162	289	4.48	1.130
	%	0	0	10.8	33.1	56.1	100	89.6	

Standard deviation represents how likely a data point is to vary a certain amount from the average in a dataset. The values of SD were not wide hence there was minimal variation in the means. The study results on indicators of adoption of cashless payment system revealed that 90.4% (mean=4.52) were of the view that adoption of cashless payment system hit the target, 89.8% (mean=4.49) were of the view that use of phone calls, 90.4% (mean=4.52) were of the view that utilization of mobile money till numbers and pay bill accounts, 85.6% (mean=4.28) were of the view that use of mobile phone payment apps, 89.8% (mean=4.49) were of the view that use of virtual bookings while 89.6% (mean=4.48) were of the view that payments via debit and smart cards were adopted.

4.5 Correlational Analysis

The study sought to establish the relationship between the study variables. The study results on the relationship between determinants and the adoption of a cashless payment system are presented in Table 4.

Table 4

Relationship between Study Variables

Correlations			
		Perceived financial value	Adoption of a cashless payment system
Perceived financial value	Pearson Correlation	1	
	Sig. (2-tailed)		
Adoption of a cashless payment system	Pearson Correlation	.679**	1
	Sig. (2-tailed)	0.000	
	N	289	289

**. Correlation is significant at the 0.01 level (2-tailed).

The study results indicated that there was a significant correlation between perceived financial value and the adoption of the cashless payment system (r=0.679, p=0.000). Pearson correlation coefficient of 0.679 showed a strong positive correlation between perceived financial value and the adoption of a cashless payment system and that 67.9% of the time perceived value will move with the adoption of a cashless payment system.

4.6 Regression Analysis

Regression analysis was conducted to produce the model summary, which shows how best the variables are explained in the model. as well as the coefficient table that provided information on the strength and significance of the relationship between the predictor variable and the outcome variable

4.6.1 Model Summary

The study performed regression analysis to estimate the relationships between the study variables. The study results were as tabulated as follows.

Table 5

Model Summary

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.936[a]	0.877	0.868	0.0868	99.676	0.000[b]

The R Square from the table above indicates 0.877 meaning that 87.7% of variations in adoption are explained by the perceived value of the cashless payment system.

4.6.2 Regression Coefficients

The effect of perceived value on the adoption of a cashless payment system by the matatu sector in Nairobi County, Kenya was determined using regression analysis. The table displays the results

Table 6

Relationship between Perceived Financial Value and of Adoption of a Cashless Payment System

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.369	0.224		1.648	0.105
Perceived financial value	0.263	0.024	0.534	10.744	0.000

a. Dependent Variable: Adoption of cashless payment system

Given the coefficient value of 0.543, it implies that, on average, a unit increment in perceived value causes a 0.543 improvement in the adoption of a cashless payment system. The t-value of 10.744 and a p-value of 0.00 indicate that perceived value is a significant predictor of the adoption of a cashless payment system in the matatu sector in Nairobi County.

The regression equation generated for the study was as follows.

$Y=0.263+0.534X_1$

Adoption of cashless payment system = 0.263 + 0.534(Perceived financial value)

4.6.3 Test of Hypotheses

The hypothesis was;

Ho_1: Perceived financial value does not affect the adoption of the cashless payment system in the Matatu sector in Nairobi County. The study findings indicated that there was a statistically significant effect of perceived financial value on the adoption of the cashless payment system (p=0.000). The study therefore rejected the null hypothesis and accepted the alternate hypothesis which showed that perceived financial value affected the adoption of a cashless payment system in the Matatu sector in Nairobi County, Kenya.

4.7 Interpretation of Findings

The research effectively mitigated the impact of gender bias by gathering data from individuals of all genders, ensuring that the collected information reflected the perspectives of both sexes and thereby eliminating any discrepancies in the percentage distribution. A significant portion of the participants fell within the age range of 26 to 35 years and older, suggesting that the workforce comprised predominantly experienced individuals. This indicates that the researcher successfully obtained data from various age demographics, thereby capturing the viewpoints of all age groups. Furthermore, the majority of respondents reported a tenure of 11 to 15 years, which points to a high level of employee retention, facilitating the presence of skilled and seasoned personnel for optimal service delivery to the public. This finding illustrates that the data encompassed a wide range of experiences in terms of years worked within the sector. Consequently, it can be inferred that the study gathered diverse opinions from participants, and the responses obtained accurately reflected the realities of the workplace, free from biases associated with prolonged tenure or relative inexperience within the organization.

4.7.1 Perceived financial value and Adoption of cashless payment system

The study results on the effect of perceived financial value on the adoption of a cashless payment system indicated that the majority of the respondents believed that the adoption and the implementation of revenue collection have affected the adoption of the cashless payment system. Revenue collected is strongly related to the number of transactions completed and operating costs. The perceived financial benefits associated with cashless payment systems have facilitated their adoption by streamlining the clearance process, minimizing instances of diversion, and enhancing

compliance. Consequently, this indicates that a certain degree of efficiency has been achieved as a result of these perceived financial advantages.

4.8 Discussions

The results of the study revealed a statistically significant impact on the perceived financial value and the adoption of cashless payment systems. This findings align with the work of Wang et al. (2022), who demonstrated that the perceived value associated with cashless payments positively influences the intention to use such systems, with this relationship being mediated by psychological safety.

Rahman, Ismail, and Bahri (2020) found that performance expectancy and facilitating conditions exert the most substantial influence on the adoption of cashless payment methods. Moreover, perceived technology security is strongly correlated with the adoption of cashless payment systems. The study also identified that hedonic motivation, social influence, and innovativeness are positively associated with the adoption of cashless payments. The current study is totally in support of the findings in the previous study as perceived financial value enhances adoption of cashless payment system in Matatu industry. The current study is also by extension highlighting that these insights in the current and previous study could be valuable for policymakers aiming to alleviate consumer concerns and facilitate a successful transition to a cashless society.

This current study has similar results to a study in Germany by Dotzauer and Haiss (2017), that indicated that out of the examined six barriers, the tradition, risk, and value barriers have proven to be significant in influencing the adoption intention of the questioned German consumers towards mobile payment services. Additionally, a connection between the characteristics of age and smartphone usage behavior and the adoption intention could be detected. A key finding is that an innovation resistance behavior among German consumers toward mobile payment exists according to this study. The current study supports this resistance behavour of users noting that perceived value can enhance adoption of cashless payments in the Matatu industry.

Moghavvemi et al. (2021) identified several factors influencing merchants' decisions to adopt mobile payment systems, highlighting the benefits of reduced payment processing times and fees, convenience, and improved security features as key motivators. This current study is in support of the previous study that benefits that accrue from the use of the new technology will enhance adoption. Conversely, challenges such as technological incompatibility, complexity, investment costs, insufficient knowledge, and critical mass were noted as significant barriers. This study contributed to the limited understanding of mobile payment systems among Malaysian merchants, offering insights that are beneficial for both industry stakeholders and policymakers. The scope of the current study did not investigate the useability of the casless payment system however it supports the previous study in its findings.

Vashistha, Anderson, and Mare (2019) observed that while customers expressed interest in mobile payment systems due to referral rewards and sign-up incentives, they exhibited reluctance to utilize these systems on a regular basis. In contrast, merchants perceived mobile payments as an additional burden rather than a beneficial tool for their operations. The current study in support of the previous study as by matter of fact consumers , merchants and other industry participants will only adopt a technology if the perceived value outweighs the costs of using the technology.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The purpose of this study was to establish the effect of perceived value on the adoption of a cashless payment system in the Matatu sector in Nairobi County, Kenya. The research question was; what is the effect of perceived financial value on the adoption of a cashless payment system in the Matatu sector? The study was anchored on institutional theory. Based on the study findings, the study made the following conclusions: Adoption and the implementation of revenue collection affect the adoption of a cashless payment system. The introduction of perceived financial value facilitates the acceptance of a cashless payment system by streamlining the clearance process, minimizing instances of diversion, and enhancing compliance.

5.2 Recommendations

Research shows that several factors influence the acceptance of cashless payment systems. It is recommended that current PDQ machines support all smart card types, including credit and Visa cards while being user-friendly and affordable for businesses. To make cashless options more appealing, costs should be reduced, and pricing should be based on long-term usage rather than individual trips. For example, passengers could preload funds for weekly or monthly bus fares at a standardized price. Management should assess the organization's effectiveness and efficiency by implementing structures to meet objectives. Organizations need to create organized mechanisms to achieve their goals.

The absence of a suitable legal framework for electronic payments calls for collaboration between the private and public sectors to establish necessary arrangements that encourage technology adoption among Matatu operators in Nairobi. Government intervention significantly impacts the uptake of electronic payment systems among Matatu SACCOS, highlighting the need for effective policies and strategic plans from the national government to promote technology adoption and enhance operators' core competencies.

The research highlights that the capacity of Matatu owners is a major barrier to success, underscoring the need for collaboration between public and private sectors in ICT training. This initiative aims to equip Matatu operators with ICT tools to enhance electronic payment adoption nationwide. The study reveals a significant knowledge gap among operators in Nairobi, stressing the need for tailored ICT programs to improve their skills.

Government intervention is crucial for the adoption of electronic payment systems among Matatu SACCOS in Nairobi. The lack of support from authorities calls for the national government to create effective policies and strategic plans to promote technology integration and strengthen the competencies of Matatu operators.

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