Customer Preference for Electronic Payment Systems for Goods: A Case Study of Some Selected Shopping Malls, Bolgatanga

Gabriel Kofi Armah [a], Elvis Atia Awonekai [a], Ugochukwu Franklin Owagu [a*] and Japheth Kodua Wiredu [a]

[a] *School of Computing and Information Sciences, C. K. Tedam University of Technology and Applied Sciences, Navrongo, Ghana.*

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

The transformation of payment systems in the digital age has reshaped the way customers interact with businesses. This study, conducted at Melcom Mall in Bolgatanga, Upper East Region, Ghana, delves into "Customer Preference for Electronic Payment Systems for Goods." Through extensive surveys and analysis, this paper reveals critical insights into the electronic payment behaviors and preferences of customers. Key findings underscore the dominance of monthly electronic payment usage, with mobile wallets emerging as the preferred method. Customers exhibit high levels of satisfaction, emphasizing the importance of user-friendly and secure payment solutions. Convenience and security play pivotal roles in shaping customer choices, while rewards and promotional campaigns also significantly influence their preferences. Despite the success of

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Corresponding author: E-mail: Benjaminfranklin034@gmail.com;

electronic payments, customers express concerns about hidden fees, technical issues, and the responsiveness of customer support. In response, we propose recommendations to enhance transparency, user education, technical infrastructure, payment options, security measures, tailored promotions, and responsive customer support. This paper serves as a valuable guide for merchants and policymakers in optimizing electronic payment systems, fostering customer satisfaction, and adapting to the evolving landscape of digital payment methods.

1. INTRODUCTION

In the current era, which is defined by constant advancements in technology and the ever changing ways people buy things, the world of business has experienced a significant and deep-seated change. As new digital innovations continue to reshape the traditional ways of doing things, one crucial factor that has emerged as a key to success for businesses in all kinds of industries is the way people pay for things electronically, [1]. This shift is particularly notable in the retail sector. This part of the business world is at the forefront of these changes, dealing with strong competition and having to adapt to the quickly shifting preferences of customers. The dynamic nature of consumer behaviors and the intense competition in the retail sector make it a dynamic and challenging arena to navigate, [2].

In the dynamic and bustling city of Bolgatanga, Shopping Malls have solidified its position as a significant player in the realm of retail. Drawing in a diverse crowd hailing from various walks of life, the malls serve as a go-to destination for individuals seeking a wide array of products and goods to cater to their needs and desires. It has truly become a hub of consumer activity, reflecting the changing preferences and shopping behaviors of the local population, [3].

The focus of this study is to delve into the intricate aspects of how consumers behave when they shop, specifically looking at Shopping Malls in Bolgatanga. The researchers are particularly interested in understanding how people like to pay for things when they use electronic methods. The goal is to uncover the reasons why people prefer these ways of paying and how these preferences affect their shopping decisions. By doing this research, the aim is not only to gather facts and information but also to provide practical insights. These insights can be valuable for the retail industry as they adapt to the changing landscape of commerce. This study has the potential to shed light on the factors that influence consumer choices, offering both academic knowledge and practical guidance for businesses. In essence, this paper serves as a bridge between theoretical discussions and real-world applications, contributing to a better understanding of the rapidly evolving world of retail in the context of electronic payments [4]. The rest of this paper is arranged as follows: Section 2 presents other literatures reviewed; Section 3 presents the methodology; Section 4 presents the results and discussions; Section 5 presents the summary, conclusion and recommendation.

2. LITERATURE REVIEW

The previous section introduces the research as well as the background of the paper. This section explores the existing body of research on customer preferences for electronic payment systems, with a focus on the case study of shopping Malls, a leading retail chain.

2.1 The Evolution of Electronic Payment Systems

Trautman [5], analyzed the primary risks faced by e-commerce and electronic payment practitioners by examining disclosures in annual reports from eBay, which is the parent company of PayPal, along with other related documents. It discusses various risk factors, including credit card issues, U.S. state money transmission regulations, online and mobile expansion, and dependence on internet connectivity. Additionally, the paper delves into global concerns, such as anti-money laundering and counter-terrorism laws. The author highlights that PayPal incurs substantial expenses related to accounting, legal, and management efforts to address these perceived risks associated with e-commerce, cyber, information technology, and electronic payment systems. Ultimately, the article aims to provide valuable insights into the challenges faced by eBay and PayPal within the evolving landscape of electronic payment systems and internet operations.

Al-Okaily et al. [6], delved into the determinants of mobile payment system adoption in Jordan, employing the extended UTAUT2 model with variables like awareness, trust, security, and privacy. Their findings reveal that factors such as price value, social influence, performance expectancy, awareness, and trust significantly influence the decision to use mobile payment systems. Notably, trust acts as a mediator between security, privacy, and mobile payment adoption. This research emphasizes the need to consider these factors when upgrading Jordan's Mobile Payment system and provides valuable insights for decision-makers at the Central Bank of Jordan. Similarly, Morosan and DeFranco's study supports the positive impact of organizational and technical infrastructure on users' decisions to adopt mobile payment systems, underscoring the importance of understanding the direct and indirect effects of factors like security, privacy, awareness, and trust on such adoption decisions.

Technology Acceptance Model (TAM), and Unified Theory of Acceptance and Use of Technology (UTAUT) to understand technology adoption, this research explores specific factors influencing mobile payment adoption. These factors encompass perceived usefulness, ease of use, trust, security, convenience, relative advantages, pricing, and perceived risk. Notably, the paper underscores a gap in the existing literature, which lacks a focus on tier-II cities in India. Therefore, this study aims to bridge this gap by examining digital payment adoption within the context of a tier-II city, considering factors such as perceived risk, perceived security, perceived usefulness, and user intent.

2.2 Factors Influencing Customer Preferences

Man and Qiu [7], delved into the factors that influence consumer buying behaviors within shopping malls, identifying environmental, service-related, administrative, transportation, and location factors as key independent variables. The research framework was established through a comprehensive review of existing literature.

Prior studies, including those by [8] and [9], have affirmed the positive impact of environmental factors on consumers' purchasing behaviors. Likewise, research conducted by [10] and [11] has highlighted the substantial relationship between transportation and location factors and consumer buying behaviors. The findings of this study further validate these assertions, demonstrating that environmental, transportation, and location-related factors indeed wield significant influence over consumers' buying behaviors within shopping malls [12,13], recognized a significant research gap, where most prior studies in the field of retailing and consumer services have predominantly concentrated on developed countries, leaving ample room for future investigations within the context of malls in developing nations. To address this, the author recommends that forthcoming researchers utilize established theoretical models like the VAB model or the MALLVAL measure, as outlined in the literature review section, and put these models to the test through empirical data analysis. Furthermore, the paper advocates for broader research efforts targeting various consumer segments to gain deeper insights into their preferences for malls within emerging markets. It proposes that comparisons across different emerging economies and over time can yield valuable comparative insights. Additionally, the author introduces theoretical propositions designed to invigorate further research endeavors, with a particular focus on understanding the preferences of young consumers for malls in emerging markets, thus serving as a catalyst for more scholarly exploration in this area.

2.3 Case Studies in Electronic Payment System Preferences

Case studies provide valuable insights into specific contexts and businesses. In this case, the focus is on Melcom Mail: Melcom Mail Annual Reports and Customer Surveys. Examining Melcom Mail's annual reports and customer surveys can provide firsthand data on the electronic payment preferences of their customers. These documents may reveal trends in the adoption of various payment methods. Melcom Mail's Digital Transformation Journey (Internal Documentation). Exploring Melcom Mail's internal documents related to their digital transformation journey, including the introduction of electronic payment systems, can offer insights into the motivations and strategies behind these changes, [14].

2.4 Mobile Payment Preferences

Mobile Payment Preferences With the proliferation of smartphones, mobile payment systems have gained prominence. Research in

this area helps us understand customer preferences for mobile payment apps: Statista Mobile Payments Report. Regularly updated reports from Statista on mobile payment trends and user preferences provide up-to-date statistics and insights into the adoption of mobile payment apps.

Prior research has explored mobile payment system adoption in different countries, emphasizing factors like perceived advantages, convenience, risk, and pricing, ease of use, trust, and security as determinants. However, there is a noticeable research gap concerning tier-II cities in India. The paper aims to address this gap by examining digital payment adoption within the context of a tier-II Indian city. It focuses on factors such as perceived risk, perceived security, perceived usefulness, and user intent. This research contributes to a more comprehensive understanding of mobile payment adoption in India, especially in non-metropolitan areas.

Bullock [14], highlighted the importance of maintaining competitive pricing in electronic payments for merchants as cash usage decreases. It proposes two strategies to achieve this goal: surcharging, where merchants can impose fees on customers using specific payment methods, and least-cost routing, which allows merchants to choose the most cost-effective payment route. Additionally, the research discusses the decline in cheque usage over the past two decades and the ongoing debate about the future of the cheque system, given its inherent costliness and decreasing usage. The potential closure of the cheque system is under consideration, particularly with the rise of electronic conveyancing and alternative bill payment methods. However, concerns persist regarding the lack of suitable alternatives for individuals without reliable internet access or debit/credit cards. The COVID-19 pandemic has disrupted various aspects of the retail payments system, impacting economies, employment, businesses, and households. Consequently, monetary and fiscal policies have been employed to alleviate the economic repercussions of the pandemic.

Below is a table that a summary of the literature review with the heading showing the author, year, study focus, and key finding.

Table 1. Literature comparison

Author	Year	Focus	Key Findings
Trautman (2015)	Risks in e-commerce and electronic payments	- Explored risks faced by eBay and PayPal. - Discussed credit card issues, state regulations, online and mobile expansion, and global concerns like anti-money laundering.
Al-Okaily et al. (2022)	Mobile payment adoption in Jordan	- Used UTAUT2 model. - Factors influencing adoption: price value, social influence, performance expectancy, awareness, and trust.
Morosan and DeFranco (2012)	Factors in mobile payment adoption	- Organizational and technical infrastructure impact adoption. - Emphasized security, privacy, awareness, and trust.
Kumar and Palanisamy (2019)	Consumer adoption of mobile payments in India	- Explored factors like perceived usefulness, ease of use, trust, security, convenience, relative advantages, pricing, and perceived risk. - Focused on a gap in literature regarding tier-II cities in India.
Mok Kim Man and Cai Qian Qiu (2021)	Factors influencing consumer buying behaviors in shopping malls	- Identified environmental, service-related, administrative, transportation, and location factors as key variables. - Emphasized the importance of environmental and location factors on consumer behaviors.
Paul et al. (2016)	Determinants of consumer satisfaction in retail stores	- Explored factors like social desirability, staff friendliness, shopping economy, shopping ambience, family shopping, and deal proneness. - Aimed to stimulate further research in consumer

Author	Year	Focus	Key Findings
		satisfaction.
Bullock (2020)	Competitive pricing in electronic payments	- Explored strategies for maintaining competitive pricing as cash usage decreases. - Discussed surcharging and least-cost routing.
Chaffey and Ellis-Chadwick (2019)	Critical success factors of mobile payment services	- Identified critical success factors for mobile payment services. - Informative for businesses enhancing mobile payment offerings.
Li´ebana-Cabanillas et al. (2014)	Factors influencing mobile payment adoption, with a focus on age	- Explored factors influencing adoption and the moderating effect of age. - Essential for understanding customer preferences among different age groups.

2.5 Section Summary

The literature review serves as a critical foundation for the subsequent section of this research, providing the necessary context and theoretical framework to understand customer preferences for electronic payment systems. It highlights the importance of customer centric approaches in designing and optimizing payment solutions and sets the stage for the empirical investigation conducted at Shopping Malls, Bolgatanga. The next section delves into the methodology used in this paper.

3. METHODOLOGY

The last section explored existing literatures, while this section presents the research approach and design used along with elaborations on the target population, sample size and sampling technique. Explanations have also been provided on the methods of data collection, the process of data analysis as well and the ethical considerations for this study.

3.1 Study Scope and Target Population

This study is centered on shopping Malls, a prominent retail hub situated in Bolgatanga, Ghana. As the primary data collection site, shopping Malls provide a concentrated and practical setting to investigate customer preferences for electronic payment systems in a real-world retail environment. The target population under scrutiny consists of individuals who actively participate in shopping activities at shopping Malls, Bolgatanga. This population represents a diverse cross-section, encompassing local residents, tourists, and visitors to the mall. This inclusivity ensures a comprehensive exploration of electronic payment preferences among a wide range of patrons.

3.2 Research Design

This case study seeks adopted the use of online surveys to determine and examine the customers preference on electronic payment in exchange for goods and services in the capital town of the upper east region, Bolga in particularly. This study aims to analyze between the electronic mode payment and that of the manual mode of payment which one is more preferable by the customers in Bolga Township.

3.3 Data Collection

This is a pivotal section within the study and it outlines the methods and procedures used to gather the data necessary in answering the research questions. It also provides transparency and credibility to the research by detailing how the data was collected and ensuring that the study can be validated by others. The breakdown of the data collection is outlined below.

3.3.1 Participants

A total of 208 participants were used for the paper. These participants were all people who were customers to most of the malls in Bolga town. Also, the target population were participants with big size shops, small size shops, table top-sellers and those who carry around and sell, during market days and non-market days.

3.3.2 Tools

i. Questionnaire: Online questionnaire tools were employed and this was designed to make respondents give responses at their comfort and convenience and also while keeping their confidentiality.
ii. Interviews: The researchers to gain insights into the experiences and

perspectives of the interviewees on the customer's preference on electronic of payment in exchange for goods and services in the capital town conducted an in-depth interview.

3.3.3 Data Source

The researchers acquired primary data through the use of questionnaires and interviews. The closed questionnaire was used hence, restricting respondents from giving responses out of context. Also, secondary data was sourced from the main malls in Bolgatanga Shopping malls.

3.3.4 Procedures

The data for the study was taken virtually; hence, expect for the interviews, all other responses from participants were collected anonymously. A step-by-step approach to how the data was collected is explained below.

i. For the virtual responses, after the questionnaire was set, the link to the form was shared to the general public.
ii. It was clearly stated inside the form that only people who were regular customers of the Bolgatanga Shopping Malls.
iii. People were not forced or pressured into answering the questions. Thus, all participants answered questions on their own will.
iv. A participant could only respond once. Thus, one could not respond again after submission. Personal questions were avoided in attempt not to probe into participants' privacy and emails were not also collected. Hence, participants' identity was highly secured, since there is no way to identify the responses.

3.3.5 Data Validation

Pilot testing was employed as a way of ensuring the validity and reliability of the data. Before the general sample size was used, the researchers tried the first questionnaire that was created on 8 people. This was done to see the behavior people would exhibit during the main data collection. It was also done to allow participants to give their feedback and let the researchers know whether the questions were good enough or to still had to be worked on. After the test, the researchers were able to add a few more questions that were suggested by the participants.

3.3.6 Sampling Technique and Size

For this study, the quota sampling technique was used to select the institutions of learning used for the sampling and the data collection. The quota sampling technique is a nonprobability sampling used to obtain a representative sample from a target population [15]. This method allows the researchers to divide a population into subgroups based on certain characteristics and then select the participants from each subgroup in proportion to their occurrence in the population. To begin with, of all the various levels of, shops, other ways of selling within Bolga Township, only Bolgatanga shopping malls were selected for the survey. Secondly, other three (3) main super markets were used for the sampling directly patronize the Bolga main mall. Then it was again mapped to only customers who were already customers to these malls. The sample size was made up of participants who were committed customers to the selected malls.

Formula to Determining the Sample Size

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{E^2} \tag{3.1}$$

n is the required sample size.
Z is the Z-score corresponding to your chosen confidence level.
p is an estimate of the population proportion (you can use your expected proportion).
E is the margin of error.

In the context of this paper, the sample size justification is a crucial aspect of ensuring the validity and reliability of the data collected. The population under investigation is well-defined, representing the target group that the 250 questionnaires were originally intended for. To evaluate the appropriateness of the sample size, a specific confidence level and margin of error have been set, with the confidence level indicating the desired level of trust in the research results and the margin of error defining the acceptable range of variability. Using a sample size formula designed for estimating population proportions, the required sample size has been calculated based on the chosen confidence level and margin of error. This calculated sample size serves as a benchmark against which the actual sample size of 208 can be compared, offering insights into the adequacy of the sample size for the research objectives.

The comparison between the calculated required sample size and the actual sample size is instrumental in determining whether the data collected is statistically justifiable. If the actual sample size meets or exceeds the calculated requirement, it suggests that the sample size is sufficient to achieve the research objectives with the chosen level of confidence and margin of error. This validation of the sample size ensures that the findings of the study are statistically robust and reflective of the target population. However, it is essential to bear in mind that the suitability of the sample size also relies on the specific research goals and available resources. Smaller sample sizes may be justified in cases where they align closely with the research objectives and limitations. By following this process, the research can provide valuable insights based on a well-justified sample size.

3.4 Data Analysis

Data collected from respondents were quantitative data that were cleaned, and preprocessed to ensure accuracy and reliability with python programming language. In addition, the collected data was statistically analyzed using seabons libraries from the python programming language. The results of these data will be presented using graphs and charts.

3.5 Data Management

It is only the researchers that has access to the responses. When the researchers stopped taking responses, the responses were downloaded as an Excel spreadsheet for data cleaning and analysis. The data has been stored in a Google drive for enhanced security during and even after the research.

3.6 Section Summary

This section justifies the research methodology used in line with this study. Thus, to study the variations of perceptions and experiences about the study topic, Google Forms was utilized to gather data from students in tertiary institutions. The participants were selected through a quota sampling technique. Based on the responses, the study undertook a rigorous process of data analysis through different ways to develop categories of description. The next section outlines the result of this research.

4. RESULTS AND DISCUSSION

In this section, the study is delve into the findings and engage in a comprehensive discussion

based on the data collected. These responses shed light on customer preferences regarding electronic payment systems for purchasing goods, offering valuable insights into consumer behavior and choices in the context of Shopping Malls.

4.1 Results

The findings derived from our data collection efforts are presented in figures, encompassing the responses we gathered.

Objective One (1): Investigate the current patterns of electronic payment systems among customers.
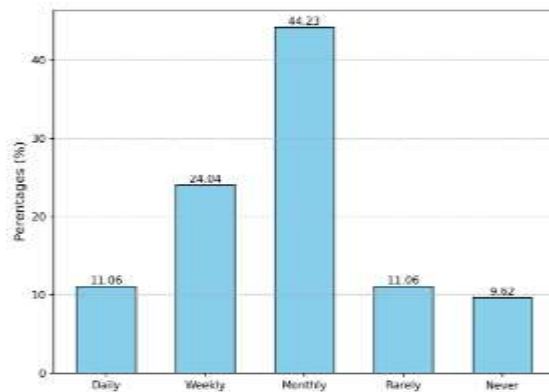

Fig. 1. Frequency of Electronic Payment Method Usage for Transactions

Fig. 1 shows the analysis of customer payment preferences at Shopping Malls, Bolgatanga, it is evident that the usage of electronic payment methods follows distinct patterns. Notably, a substantial majority of customers (44.23%) exhibit a preference for monthly usage, signifying a prevalent inclination towards employing electronic payment systems for periodic transactions.

Fig. 2 shows the analysis of customer transaction preferences at Shopping Malls, Bolgatanga, it is evident that electronic payment systems serve diverse purposes. Notably, the data reveals that a substantial majority of customers (44.23%) primarily utilize these systems for money transfers, indicating their popularity as a means for facilitating fund transfers, potentially encompassing remittances or peer-to-peer payments.

Fig. 3 shows that, the data reveals a strong preference for mobile wallets, followed by

credit/debit cards and online banking, among customers at Shopping Malls. These findings highlight the need for the mall to continue supporting and promoting mobile wallet usage while also accommodating customers who prefer other electronic payment methods to ensure a seamless and inclusive payment experience.
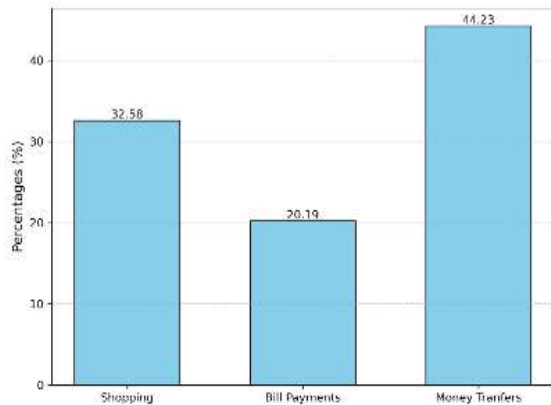

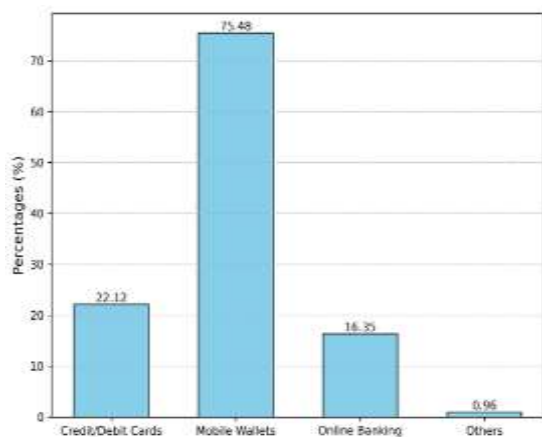**Fig. 2. Variety of Transactions Conducted via Electronic Payment Systems**

Fig. 3. Preferential and Most Frequent Electronic Payment Methods

Research Objective Two (2): To identify the key drivers that influence customers to prefer electronic payment systems.

Fig. 4 shows analysis of the factors influencing customers' adoption of electronic payment systems at Shopping Malls reveal several key drivers. Notably, convenience emerges as the primary motivator, with 31.25% of customers citing its significance. This underscores the appeal of quick and efficient transactions, especially during peak shopping periods.
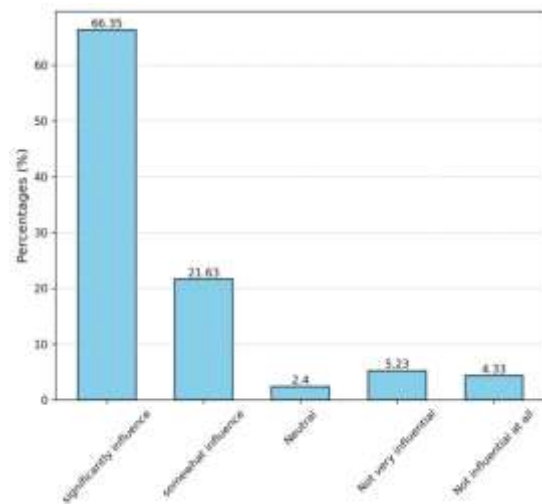

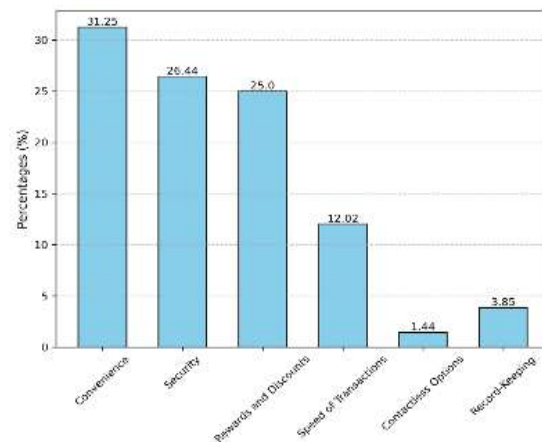**Fig. 4. Factors Influencing the Use of Electronic Payment Systems**

Fig. 5. Influence of Security and Fraud Protection on Electronic Payment Preference

Fig. 5 shows analysis of customer preferences regarding the influence of security and fraud protection features on their choice of electronic payment systems at Shopping Malls demonstrate a spectrum of viewpoints. Most significantly, a substantial majority, constituting 66.35% of customers, highly prioritize these features, emphasizing their significant role in ensuring the safety and security of their transactions.

Research Objective Three (3): To compare the different electronic payment systems available.

Fig. 6 shows analysis of electronic payment system usage at Shopping Malls highlight several key trends. Notably, mobile wallets emerge as the dominant choice, with 52.40% of customers actively utilizing them for transactions.

This underscores the widespread popularity and prevalence of mobile wallet applications among shoppers.
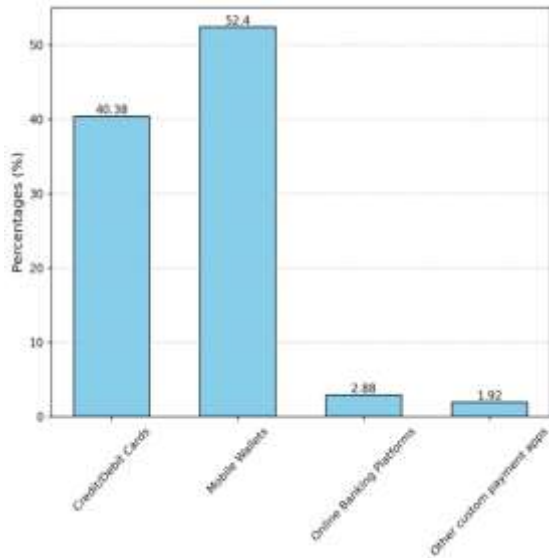
Research Objective Four (4): To explore barriers that customers face when using electronic payment systems.

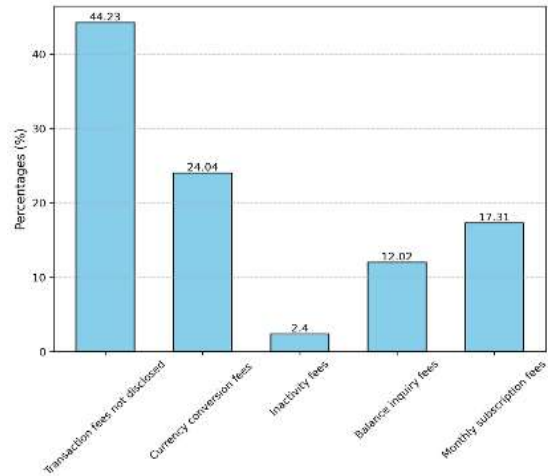**Fig. 8. Security Concerns and Fears in Using Electronic Payment Systems.**

Fig. 6. Electronic Payment Systems Used by Respondents

Fig. 8 shows that customers at Shopping Malls have various security concerns and fears when using electronic payment systems, including data breaches, fraudulent transactions, phishing attacks, unauthorized access, lack of control, personal information exposure, and inadequate authentication. Addressing these concerns through robust security measures and customer education is vital to building trust and confidence in electronic payment systems.
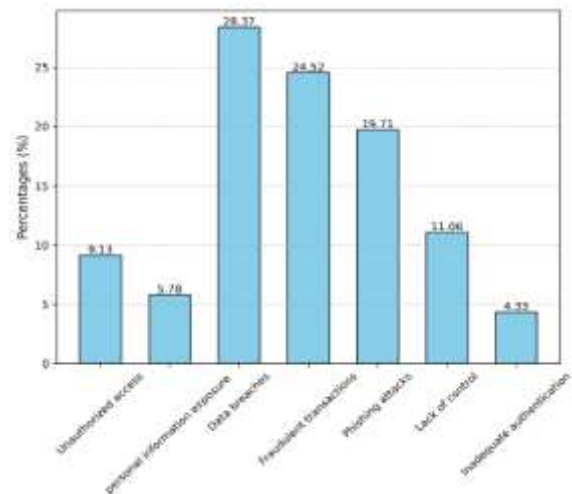

Fig. 7. Challenges and Limitations in Using Electronic Payment Systems

Figure 7 shows that customers at Shopping Malls face various challenges and limitations when using electronic payment systems, including awareness gaps, transaction fees, difficulty in issue resolution, limited acceptance, technical issues, security concerns, and connectivity problems. Addressing these challenges and providing solutions can contribute to a smoother and more satisfying payment experience for customers.

Fig. 9. Challenges with Hidden Fees and Charges in Electronic Payment Systems

Fig. 9 shows that Customers at shopping Malls exhibit varying levels of concern regarding

hidden fees or additional charges associated with electronic payment systems. The most prominent issue is the lack of transparency surrounding transaction fees, with a substantial 44.23% of respondents finding it problematic. This underscores the importance of providing clear and upfront information about fees to build and maintain customer trust.
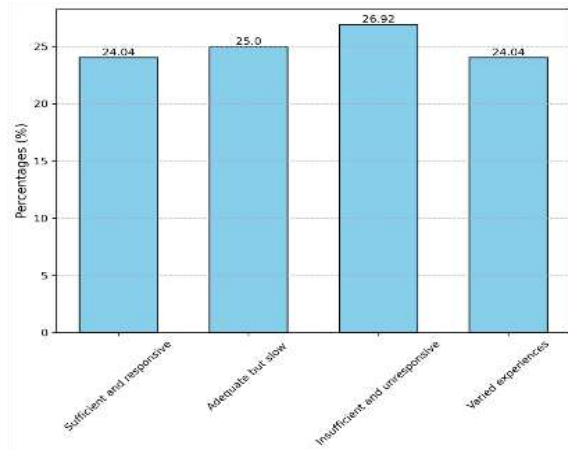

Fig. 10. Customer Satisfaction with Electronic Payment Support

Fig. 10 shows the findings that reveal a diverse landscape of customer experiences with electronic payment-related customer support. Notably, the largest group of customers, comprising 26.92%, perceives support as insufficient and unresponsive, indicating room for improvement in service availability and responsiveness.

4.2 Empirical Results Analysed

1. Frequency of Electronic Payment Usage

Findings: Monthly usage is predominant (44.23%), followed by weekly (24.04%) and daily (11.06%).

Insight: Users prefer the convenience of monthly transactions, suggesting a reliance on electronic systems for regular financial activities.

2. Types of Transactions

Findings: Shopping (35.58%) and money transfers (44.23%) are common electronic transactions.

Insight: Electronic payments are not limited to shopping but also extend to broader financial activities.

3. Preferred Electronic Payment Methods

Findings: Mobile wallets (75.48%) are highly preferred compared to credit/debit cards (22.12%).

Insight: The dominance of mobile wallets indicates a shift towards more accessible and mobile-centric payment methods.

4. Changes in Electronic Payment Habits

Findings: Increased usage (50.48%) is prevalent, while 29.81% switched to different methods.

Insight: Users are generally adapting positively to electronic payment methods.

5. Perceived Convenience

Findings: 86.06% find electronic payment more convenient.

Insight: High perceived convenience reinforces the attractiveness of electronic payment systems.

6. Factors Influencing Usage

Findings: Convenience (31.25%) and security (26.44%) are primary influencers.

Insight: Users prioritize ease of use and security in electronic payment choices.

7. Importance of Convenience

Findings: 42.79% consider convenience very important.

Insight: Emphasizes the pivotal role of convenience in user preferences.

8. Motivation for Electronic Payments: Cashback, Discounts, Rewards

Findings: 73.56% find cashback, discounts, and rewards significant.

Insight: Incentives play a considerable role in motivating users to opt for electronic payments.

9. Influence of Security on Preference

Findings: Security significantly influences 66.35% of users.

Insight: Users prioritize secure transactions, indicating the importance of trust in electronic systems.

10. Influence of Peer Recommendations

Findings: 78.37% influenced by peers to some extent.

Insight: Peer influence has a noteworthy impact on electronic payment adoption.

11. Electronic Payment Systems Used

Findings: Mobile wallets (52.40%) and credit/debit cards (40.38%) dominate.

Insight: Mobile-centric payment methods are more widely adopted.

12. Satisfaction Ratings

Findings: Generally high satisfaction ratings for mobile wallets and credit/debit cards.

Insight: Indicates overall contentment with commonly used electronic payment methods.

13. Important Features in Electronic Payment

Findings: Security (25.96%) and user-friendly interface (25.48%) are key considerations.

Insight: Emphasizes the significance of security and ease of use in electronic payment systems.

14. Challenges and Limitations

Findings: Limited awareness (25.00%) and transaction fees (25.00%) are common challenges.

Insight: Highlight areas for improvement, such as user education and transparent fee structures.

15. Security Concerns

Findings: Data breaches (28.37%) and fraudulent transactions (24.52%) are top security concerns.

Insight: Security fears emphasize the need for robust protective measures.

16. Technical Issues and Errors

Findings: Mobile app/website crashes (22.12%) and delayed transactions (24.52%) are reported.

Insight: Technical glitches may hinder user experience, indicating the need for improved system stability.

17. Problematic Hidden Fees

Findings: Transaction fees not disclosed upfront (44.23%) and currency conversion fees (24.04%) are problematic.

Insight: Calls for increased transparency in fee structures.

18. Comfort Levels in Sharing Information

Findings: 47.60% are very uncomfortable with sharing personal/financial information.

Insight: Users express significant concerns about privacy.

19. Customer Satisfaction with Support

Findings: Varied experiences with customer support (24.04%) and insufficient support (26.92%) reported.

Insight: Highlights the need for consistent and responsive customer support services.

4.3 Section Summary

Section four (4), titled "Customer Preference for Electronic Payment Systems for Goods: A Case Study of shopping Malls, Bolgatanga," offers valuable insights into the electronic payment behaviors and preferences of customers in the specific context of shopping Malls. Through a comprehensive presentation of results and subsequent discussions, the section sheds light on key aspects such as usage frequency, transaction types, preferred payment methods, satisfaction levels, and factors driving customer preferences. It also explores customer concerns and the effectiveness of customer support services. This section serves as a crucial foundation for the broader understanding of electronic payment trends and challenges within the retail landscape of Bolgatanga.

5. SUMMARY, CONCLUSION AND RECOMMENDATION

This section marks the culmination of our research. Also synthesizes the findings from the study, drawing meaningful conclusions and proposing recommendations to enhance the electronic payment landscape for both customers and merchants.

5.1 Summary of Key Findings

The study investigation has unveiled crucial insights into the electronic payment behaviors

and preferences of customers at Shopping Malls. Notable findings include the dominance of monthly electronic payment usage, the prevalence of mobile wallets, and high satisfaction with these payment methods, and the significance of convenience and security. Additionally, the study has highlighted customer concerns, including fears related to security and various challenges faced while using electronic payment systems.

5.2 Conclusion

In conclusion, the study demonstrates that electronic payment systems have become an integral part of the shopping experience at shopping Malls, Bolgatanga. Customers exhibit a strong inclination towards monthly usage and a preference for mobile wallets and credit/debit cards. The high levels of satisfaction emphasize the importance of user friendly and secure payment solutions. Security and convenience emerged as pivotal factors influencing customer choices, while rewards and promotional campaigns also play a significant role. Despite the success of electronic payments, customers express apprehensions about hidden fees, technical issues, and the responsiveness of customer support.

5.3 Recommendations

Based on our findings, we offer the following recommendations to enhance the electronic payment ecosystem at shopping Malls and similar retail environments:

1. Enhance Transparency: Merchants should clearly disclose all transaction fees, including currency conversion charges and inactivity fees, to build trust and manage customer expectations.
2. Improve Technical Infrastructure: Ensure robust technical support to address technical issues promptly, preventing disruptions in the payment process.
3. Expand Payment Options: Diversify electronic payment options and explore partnerships to offer a wider range of secure and convenient methods to customers.
4. Strengthen Security Measures: Continuously update and enhance security features to safeguard customer data and prevent unauthorized access.

CONSENT

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDIX A: LINK TO QUESTIONNAIRE

Author must think also to elaborate an econometric model on empirical part like y = f(x): descriptive analyse made is not sufficient.

Econometric Model

$$Y = \beta0 + \beta1X1 + \beta2X2 + \cdots + \beta nXn + \varepsilon$$

Where:

- ➢ Y is the dependent variable (e.g., Likert scale indicating satisfaction or frequency of usage).
- ➢ β_0 is the intercept.
- ➢ β1, β2,…, βn are coefficients representing the impact of independent variables X1, X2,…, Xn on Y
- ➢ ε is the error term.

Variables in the Model

Dependent Variable (Y)

- ➢ Customer satisfaction score.
- ➢ Frequency of electronic payment usage.

Independent Variables (X)

- ➢ Convenience (dummy variable: 1 if very convenient, 0 otherwise).
- ➢ Security (dummy variable: 1 if significantly influences, 0 otherwise).
- ➢ Rewards and Discounts (dummy variable: 1 if very significant, 0 otherwise).
- ➢ Peer Influence (dummy variable: 1 if significantly influences, 0 otherwise).
- ➢ Transaction Fees (dummy variable: 1 if problematic, 0 otherwise).
- ➢ Technical Issues (dummy variable: 1 if faced technical issues, 0 otherwise).
- ➢ Hidden Fees (dummy variable: 1 if fees not disclosed upfront, 0 otherwise).

Interpretation:

- ➢ Positive coefficients indicate a positive relationship with the dependent variable.
- ➢ Negative coefficients indicate a negative relationship.
- ➢ The significance of coefficients (p-values) helps assess the statistical significance of each variable's impact.