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CHALLENGES OF ELECTRONIC PAYMENT IN SELECTED STATE UNIVERSITIES IN SOUTH EAST NIGERIA, 2015-2022.

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Abstract

Paucity of funds has been identified as one of the major challenges facing state-owned universities in the face of declining government allocations in south east Nigeria. In the quest to combat this challenge, respective institutions have in recent times, embraced internally generated revenue to fund their activities. Disappointingly, this method of revenue collection has been marred by corruption, inefficiency, and lack of accountability, with avoidable leakages arising from manual processes, cash-based transactions, and fraudulent practices such as receipt forgery. The objective of the study is to assess the electronic payment (e-payment) systems and the internal revenue generation of selected universities in Southeast Nigeria. This study adopted survey design. The research was conducted among a population of 83,113 university staff with diverse educational qualifications and students. Aims to assess the effectiveness of e-payment systems in enhancing revenue collection, improving accountability, and overcoming challenges faced in the implementation process. Data for this study were elicited from both primary and secondary sources. This study was anchored on the Expediency Theory of Taxation, propounded by Buehler in 1936, as a framework for analysis. Findings revealed that E-payment systems significantly facilitate the timeliness and efficiency of financial transactions in universities. It also revealed that poor network and electricity

problems significantly affect the use of e-payment systems for internal revenue generation in universities. The study concluded that E-payment systems have positively impacted the accountability and transparency of IGR in state-owned universities in south east Nigeria. Based on the findings, this study recommends that state-owned universities in south east Nigeria should conduct regular training programs for staff, students, and other users to improve their technical skills and confidence in using e-payment systems.

1.1 Introduction

As Nigerian universities faced declining government allocations, internal revenue generation (IGR) became crucial to supplement funding. Institutions began generating income through tuition fees, development levies, transcript fees, workshops, and entrepreneurial ventures. However, revenue collection has been undermined by corruption, inefficiency, and lack of accountability, with leakages arising from manual processes, cash-based transactions, and fraudulent practices such as receipt forgery (Aregbeyen & Fasanya, 2017). Ojiako and Egolum (2025) pointed out that in a bid to enhance its performance and capacity to live up to its constitutional roles, a wide-range of administrative reforms, such as e-payment systems, have been initiated and implemented to boost internal revenue generation in the Nigerian public institutions. However, the effectiveness of IGR has been constrained by revenue mismanagement, weak accountability, fund leakages, and lack of transparency.

To address these issues, many universities, particularly state universities in Southeast Nigeria, have adopted electronic payment (e-payment) systems to streamline revenue collection, improve accountability, and enhance compliance. Despite this, intended outcomes remain limited due to technical inefficiencies, inadequate monitoring, system inconsistencies, low user compliance, and resistance to change. Revenue processes are often fragmented, with significant sources such as Continuous Education Programmes, postgraduate studies, pre-science programmes, entrepreneurial ventures, and university bookshops underutilized or poorly integrated into e-payment platforms, reducing revenue potential and weakening financial transparency. Challenges including delayed payment verification, poor technological infrastructure, and insufficient fraud prevention raise concerns about system reliability. Moreover, stakeholders' (students and staff) perceptions of e-payment effectiveness are underexplored. This study thus seeks to empirically examine the role of e-payment systems in enhancing internal revenue generation, improving accountability, and addressing financial inefficiencies in selected state universities in Southeast Nigeria.

1.3 Objectives of the Study

The broad objective of the study is to assess the electronic payment (e-payment) systems and the internal revenue generation of selected universities in Southeast Nigeria.

i. To examine how the e-payment systems is facilitating the timeliness and efficiency of financial transactions in universities.
ii. To identify if poor network and electricity problems affect the use of e-payment systems for internal

revenue generation in the selected state universities.

2.1 Extant Literature

2.1.1 E-payment and Generation of Revenue from Internal Source

There are series of empirical studies that have been written in line with the relationship between E-payment system and revenue generation. E-payment is a form of financial exchange that takes place between the buyer and seller facilitated by means of electronic communication. Otieno, Oginda, Obura, Atila, Ojera, and Siringi, (2016) carried out a study on information system and collection of Personal Income Tax and used the Chi-square methodology. The study found that there is a relationship between Information Systems (IS) and both efficiency and effectiveness in revenue collection, there is a strong positive relationship between Internal Control Systems and revenue collection. However, resistance to change by the council staff was derailing the full implementation of information system. The study is useful to the present study for full integration of IS, and more specifically e-payment system, in revenue collection.

Wahab (2017) carried out a study on sales terminal in Nigeria and it used Descriptive Methodology. It established that the adoption and use of the e-payment system was found to be low mainly due to the inadequate availability of point of sale terminals at shopping points among others. These are affecting the perceived ease of use even though the perceived usefulness of epayment systems is strongly present among individuals and businesses. The study recommended customer education and wide spread deployment of e-payment point of sale terminals to merchants. Kayaga (2016) carried out a study in South Africa and made use of Simple regression/ ANOVA/ Description methodologies (like the current study) because the survey design was adopted. The study showed that new technology alone is not sufficient if the government does not recognize the need for skilled tax officials especially in the collection of taxes from income of personal individuals. The scholar further avers that, effective tax administration requires qualified tax personnel with requisite skills to maintain these systems and operate them to their fullest potential.

Okifi and Ogbunu (2015) carried out a study and the crux of such study on E-payment System in Nigeria by focusing on its economic benefits and challenges. Due to the nature of the study, it adopted descriptive methodology and made use of materials from secondary sources. According to them, the arrival of the internet has taken E-payment and transactions to an exponential growth level. The benefits of e-payment are unquantifiable in that it would galvanize Nigeria into a cashless society and elimination of fear of the unknown. Though epayment is faced with challenges, like public acceptability, lack of uniform platform being operated by the banks, lack of adequate infrastructure and issues of security, with the proper use of e-payment system, corruption which is a cancer in government arena will be holistically addressed. Simiyu (2016) studied the impact of E-payment on revenue from taxation in Nigeria and adopted the Regression methodology using data from the central bank of Nigeria from 1990 to 2014. The study established that, tax officers accepted bribes when offered to reduce tax liability and demand for bribes when they visited, a situation that hugely affected revenue collection in Nigeria.

The paper by Olurankinse and Oladeji (2018) examined self-assessment, e-taxation payment systems and revenue generation in Nigeria. Both Pearson's product moment correlation coefficient statistical tool and the regression analysis were used as the methodologies to test the hypotheses the respondents were drawn from 30 tax executives from 30 quoted companies in Rivers State of Nigeria. Results indicate a positive and significant relationship between self-assessment and e-taxation payment systems and revenue generation. The paper concludes that e-taxation is an online tax payment and administration system that is used for the generation of taxes from all competent taxpayers based on statutory guidelines for the purpose of assessing tax returns in the economy. A study carried out by Oladutire (2015) on the Effectiveness or Extent of Implementation of Self-Assessment Programme in Nigeria, the descriptive methodology was adopted with focus on selected corporate bodies and the FIRS in Rivers State; found out that the self-assessment tax system is a good means for revenue generation in a cost-effective manner.

Olorunse (2015) carried out study on the impact of electronic banking in Nigeria banking system, the primary data were collected through the use of questionnaire while the secondary data were data collected from CBN electronic banking guideline, annual report of Unity Bank Plc. The study used both descriptive and inferential methodologies in analyzing the data. The electronic banking system in Nigeria has made banking transaction to be easier by bringing services closer to its customers. Furthermore, in the study by Siyanbola (2013) on the effect of cashless banking on Nigerian economy, a descriptive research design was adopted and Non-parametric tool of chi square was employed to analyze the data. It was discovered that dynamism in financial system is manifested by the nature and quality of payment products paraded in the system. For instance, Muema *et al.* (2015) carried out a related study on the role of E-payment on the generation of rates revenue in the Mobile parking management system using Kenya as a case study. The description analytic methodology was used in the analysis of the study, it was indicated that Nairobi county and the parking industry were generally ready to adopt the mobile parking management system, although as with any technological adoption it was bound to face some barriers which could be overcome.

Odior and Fadiya (2016) carried out a related study on the impact of cashless banking in Nigeria, its challenges, benefits and policy implications. The data employed in the study was from secondary sources using descriptive methodology and analysis with the aid of graphs, tables, charts and trend analysis of cash system in Nigeria. It was found out that the development of emoney could lead to the decline in currency demand; also, the consistent usage of e-channels in financial transactions would lead to network congestion. A further study by Kinyanjui and Kahonge (2017) on Mobile Phone–Based Parking System which focused extensively on rates charged and collected as revenue. The study thus adopted analysis of variance as the methodology and it revealed that the use of e-payment by mobile phone-based technology in mobile parking increase parking fees collection. However, there is need to develop an application to control traffic flow, allocation and availability of parking space within the streets of Nairobi, which is a major concern to every motorist. In the study by Kaburia (2018), the multiple regression methodology was used. The study on E-payment systems and alternatives for

developing countries found out that lack of suitable e-Payment alternatives was a critical challenge to the growth of e-commerce in Kenya. An e-Payment model suitable for individuals in Kenya was proposed.

2.2 Theoretical Framework

2.2.1 Expediency Theory of Taxation

The expediency theory of taxation, propounded by Buehler in 1936, posits that the primary consideration in choosing a revenue collection system is its practicability. According to this theory, the system must be effective in levying and collecting revenue, regardless of broader economic or social objectives. In essence, a revenue system that cannot be practically implemented is deemed useless. This theory is highly relevant to the present study, which examines the impact of e-payment systems on internal revenue generation in state universities in Southeast Nigeria.

In summary, the expediency theory of taxation provides a robust theoretical foundation for this study. It supports the investigation into how e-payment systems, by virtue of their practicality and operational efficiency, can significantly enhance the processes of fee payment, accountability, and internal revenue generation in state universities. This theoretical alignment underscores the importance of adopting systems that are not only technologically advanced but also pragmatically effective in meeting the revenue collection needs of higher education institutions.

2.3 Empirical Review

Ayodele (2021), examined the impact of information technology on tax administration in South West, Nigeria. The study specifically investigated the effect of information technology on tax implementation and tax planning. Data was collected through the means of structured questionnaires, while multiple regression and Pearson product moment correlation were used to analyze the data. Findings from the analysis revealed that information technology enhance the level of tax productivity and administration. The study recommend that respective agencies (Federal, State and Local Governments) responsible for tax collection should carry out one on one awareness in the form of seminars and sensitization of the process and suitability of information technology on tax administration.
Yudah (2020), examined the contribution of i-tax system as a strategy for Revenue collection at Kenya Revenue Authority. The objective of the study was to ascertain the contribution of integrated tax system as a strategy for revenue collection in Kenya revenue authority. A five-point Likert Scale structured questionnaire was used to collect primary data. Both descriptive and inferential statistics were used to analyze the data. Statistical significance of relationship among selected variables was determined using multiple regression analysis. The study established that online taxpayer registration, online tax return processing, online compliance and monitoring activities; and electronic tax payment have a significant contribution on revenue collection at Kenya revenue authority. The study recommended that Kenya revenue authority management should focus on taxpayer facilitation through a robust system of customer relationships management, efficient complaints resolution and ensuring that more resources are invested in user friendly online tax systems in order to realize long term benefits.
Otieno (2019), empirically examined the influence of information and communication technology (ICT) on revenue collection in county government in Kenya. The objectives

of the study were to determine the influence of ICT system for single business permits on revenue collection; evaluate the influence of ICT system for land rates on revenue collection; establish the influence of ICT system for bus park on revenue collection in Migori and Homa Bay county governments in Kenya. Primary data were collected with the use of questionnaires, and analyzed using descriptive and regression techniques. The finding showed that a strong and almost a perfect association existed between ICT systems adopted in county governments and the revenue collection; the application of ICT systems explain up to 91.9% variation in revenue collection efficiency in county governments.

3.1 Research Design

The study adopted a **descriptive survey research design**. This design was appropriate because it enabled the collection of primary data from respondents to assess the challenges, effects, and effectiveness of e-payment systems in enhancing revenue generation. This descriptive survey method allowed for the systematic gathering of information from a sample population to analyze and draw conclusions about the larger population.

3.2 Population of Study

The population of the study consists of stakeholders involved in revenue generation and collection in the selected state universities, including University bursary staff (accounting officers and revenue managers), Heads of revenue-generating units (e.g., CEP, SPGS, entrepreneurship centers, etc.), ICT/e-payment system operators, University administrators and the students (as payers/users of the system)the population of the study, which includes non-academic staff and students from the selected state universities (Ebonyi State University, Enugu State University, and Imo State University), can be tabulated as follows:

Table 3.1: Population of the Study:

University	Non-Academic Staff	Student Population	Total Population
Ebonyi State University	2,019	20,103	**22,122**
Enugu State University of Science and Technology	3,370	33,001	**33,371**
Imo State University	2,550	25,070	**27,620**

Source: University Personnel Unit and Student Affair Unit, 2024

The total population for this study, which includes both non-academic staff and students, is **83,113** individuals across the three selected universities.

3.4 Sample Size and Sampling Technique

The study used purposive sampling to select state universities based on their adoption of e-payment systems for revenue collection. From each selected university, a stratified random sampling technique was employed to ensure representation of relevant respondents (bursary staff, revenue unit heads, ICT operators, administrators, and students).

The sample size of 398 was determined using the Taro Yameni Formula of 1964while simple random sampling method or process adopted in this study.

$$n = \frac{N}{1+N(e^2)}$$

Where n = sample
N = population
e = error unit
1 = constant
:. N = 83,113

e = 0.05

$$n = \frac{83,113}{I + 83,113\ (0.05)^2}$$

$$n = \frac{83,113}{I + 83,113\ (0.0025)}$$

$$n = \frac{83,113}{1 + 207.783}$$

$$n = \frac{83,113}{208.783} = 398.24$$

n = 398

The sample size for the study is 398, which is obtained using TaroYamanne formula.

Table 3.2: Sample Distributions:

University	Population	%	Sample
Ebonyi State University	22,122	27	108
Enugu State University of Science and Technology	33,371	40	159
Imo State University	27,620	33	131
TOTAL	**83,113**	**100**	**398**

3.5 Sources of Data

Both primary and secondary sources of data were used to generate the data for this study. Primary data are data gathered from respondents through questionnaire and personal interview. The questionnaire was used because the main study was survey research while interview was used to obtain responses that would not have been gathered by the questionnaire. It provided an opportunity for in-depth interview with respondents and opportunity for clarifications on the other hand, secondary data included data collected from textbooks, journals, newspapers and other relevant write ups from internet.

3.6 Validity of data instrument

Validity as used here is the degree to which an instrument measured what it was intended to measure. Therefore, the instrument was tailored to achieve the research's objectives. Thus, the instrument used for this research was validated by; the face(expert) validity of the instrument by the help of the supervisors whose supervision/ opinions served as a thorough guide for the success of this work. The experts examined the items in terms of their content relevance, item clarity, as well as ascertained if the items were related to the objectives of the study. These suggestions of the experts and supervisors lead to the modification of the questionnaire.

3.7 Reliability of data instrument

This study adopted the Cronbach Alpha reliability coefficient technique. To do this, thirty (30) respondents who do not form part of the test group were administered the questionnaire in Nnamdi Azikiwe University. The collected questionnaires were analyzed using Cronbach Alpha method to establish the internal consistency of the instrument.

The instrument yielded Cronbach Alpha of 0.78 (see table below). Thus, the researcher considered the instrument to be appropriate for the study, since the Cronbach Alpha coefficients.

3.8 Method of Data Analysis

The quantitative data collected through the questionnaire underwent analysis using descriptive statistics, including percentages, means, standard deviations, and frequencies, with the Statistical Package for Social Sciences (SPSS). For hypothesis testing and to determine the dependent and independent variables, chi-square statistical tools were employed. The chi-square formula used on these data was

$$\mathbf{X2} = \frac{(O - E)^2}{}$$

E

Where:

- is the Observed Frequency in each category
- ***E*** is the Expected Frequency in the corresponding category
- **X2** is Chi Square

However, in order to compute the value so as to obtain the appropriate number of degree of freedom, the formula used is given as v=(c -1) (r – 1)

Where:

c = Number of columns r = Number of rows

The computed chi-square value was then compared with the tabulated value. This process determined whether the null hypotheses were accepted or rejected. The study adhered to a five percent (5%) level of significance in hypothesis testing. If the computed chi-square (2*Xc*2) value exceeded the tabulated (2*Xt*2) value, the null hypotheses were rejected, and the alternative hypotheses were accepted. Conversely, if the tabulated (2*Xt*2) value was greater than the calculated (2*Xc*2) value, the null hypotheses were accepted.

4.0 Data Presentation and Analysis

This section presents and analyses of the data collected in the course of the study. However, of the 398 copies of questionnaires distributed, 397 were completed and returned. Data obtained from the second part of the questionnaire were analysed in line with the research questions and the hypotheses and were presented in the tables below.

Table 4.8: Research Question Three: How do e-payment systems facilitate the timeliness and efficiency of financial transactions in universities?

Item	1	2	3	4	5	$\bar{X}$	Standard Deviation
	SD	D	UD	A	SA		
E-payment systems ensure payments are processed faster than manual methods.	6.0%	9.4%	10.3%	62.4%	12.0%	3.61	1.062
E-payment systems have minimized the time students spend making payments.	6.0%	9.4%	10.3%	62.4%	12.0%	3.61	1.062
Financial transactions via e-payment systems are completed without delays.	1.7%	9.3%	4.2%	46.6%	35.6%	4.08	0.975
E-payment systems allow for instant confirmation of payments.	6.8%	11.9%	4.2%	66.1%	11.0%	3.87	0.833
The timeliness of financial transactions has improved due to e-payment adoption.	2.5%	5.1%	11.0%	65.3%	16.1%	4.08	0.564
Staff productivity has increased due to reduced paperwork in financial transactions.	5.1%	13.6%	5.1%	63.6%	12.7%	3.65	1.033
E-payment systems reduce errors in transaction processing.	6.8%	16.1%	34.7%	41.5%	0.8%	3.71	0.725

The efficiency of financial services has improved with e-payment systems.	0.9%	5.3%	23.7%	62.3%	7.9%	4.10	0.749
E-payment systems provide 24/7 access to payment platforms for students.	2.5%	7.6%	5.9%	68.5%	22.9%	3.94	0.920
The integration of e-payment systems with other financial tools enhances overall efficiency.	4.5%	12.6%	9.0%	60.4%	13.5%	3.50	1.416

Source: Field Survey, 2026

This analysis addresses Research Question Three, examining how e-payment systems enhance the timeliness and efficiency of financial transactions in universities. Findings show strong positive perceptions across all items. A majority (74.4%) agreed that e-payment systems enable faster processing of payments and minimize the time students spend making payments (mean = 3.61, SD = 1.062). Timely completion of transactions received strong support from 82.2% of respondents (mean = 4.08, SD = 0.975), while 77.1% acknowledged instant payment confirmation (mean = 3.87, SD = 0.833). Improved timeliness was highlighted by 81.4% (mean = 4.08, SD = 0.564), and increased staff productivity was reported by 76.3% (mean = 3.65, SD = 1.033). Reduced transaction errors were noted by 76.2% (mean = 3.71, SD = 0.725), and 70.2% agreed that financial services have become more efficient (mean = 4.10, SD = 0.749). Notably, 91.4% appreciated 24/7 access to payment platforms (mean = 3.94, SD = 0.920). Integration with other financial tools showed more variability (73.9%, mean = 3.50, SD = 1.416). Overall, e-payment systems are widely viewed as improving timeliness, efficiency, and operational effectiveness in university financial processes, with integration as a potential area for enhancement.

Table 4.9: Research Question Four: Do poor network and electricity problems affect the use of e-payment systems for internal revenue generation in the selected state universities?

Item	**1**	**2**	**3**	**4**	**5**	$\bar{X}$	**Standard Deviation**
	SD	**D**	**UD**	**A**	**SA**		
Network issues often disrupt the use of e-payment systems.	17.1%	35.0%	8.5%	29.9%	9.4%	2.79	1.297
Hidden charges on e-payment platforms discourage their use.	8.8%	25.7%	8.0%	40.7%	16.8%	3.31	1.268
Not all students have access to the technology required for e-payment.	17.1%	35.0%	7.7%	29.9%	10.3%	3.95	1.070

E-payment systems occasionally experience technical glitches that delay transactions.	5.9%	11.0%	8.5%	44.9%	28.0%	3.79	1.154
There is inadequate support for users experiencing difficulties with e-payment platforms.	1.7%	0.9%	2.6%	48.7%	46.2%	4.37	0.738
Some stakeholders are resistant to transitioning to e-payment systems.	9.6%	20.0%	3.5%	59.1%	7.8%	3.36	1.171
Security concerns discourage some students from using e-payment platforms.	3.4%	15.5%	5.2%	62.1%	13.8%	3.91	1.095
Inconsistent updates to e-payment systems create challenges for users.	8.8%	25.7%	8.0%	40.7%	16.8%	3.31	1.268
The cost of maintaining e-payment infrastructure is a challenge for the university.	6.0%	17.2%	11.2%	54.3%	11.2%	3.47	1.091
Students face challenges navigating e-payment platforms.	8.8%	25.7%	8.0%	40.7%	16.8%	3.31	1.268

Source: Field Survey, 2026

This analysis addresses Research Question Four, examining the impact of network and electricity issues on the use of e-payment systems for internal revenue generation in selected state universities. Findings reveal several challenges affecting adoption and effectiveness. A majority (64.9%) agree that network issues frequently disrupt e-payment systems (mean = 2.79, SD = 1.297), while 72.9% acknowledge technical glitches that delay transactions (mean = 3.79, SD = 1.154). Limited access to required technology is a barrier for 63.1% of respondents (mean = 3.95, SD = 1.070), and hidden charges discourage use for 57.5% (mean = 3.31, SD = 1.268). Resistance to transitioning to e-payment is noted by 66.9% (mean = 3.36, SD = 1.171), and security concerns affect 75.9% of respondents (mean = 3.91, SD = 1.095). Inadequate user support emerges as a critical issue, with 94.9% agreeing it is insufficient (mean = 4.37, SD = 0.738). Additional concerns include inconsistent system updates (57.5%, mean = 3.31, SD = 1.268), challenges navigating platforms (57.5%, mean = 3.31, SD = 1.268), and the cost of maintaining infrastructure (65.5%, mean = 3.47, SD = 1.091). Overall, while e-payment systems offer advantages, network problems, technical inefficiencies, poor user support, and limited access hinder their optimal use in university revenue generation.

4.3 Test of hypotheses

In this section, we present hypothesis testing that has earlier been mentioned in chapter one. We test each three hypotheses for statistical significance or otherwise so that we can reject or accept each observed hypothesis.

Hypothesis III:

H_0: E-payment systems do not significantly facilitate the timeliness and efficiency of financial transactions in universities.

H_1: E-payment systems significantly facilitate the timeliness and efficiency of financial transactions in universities.

Table 4.15: Chi-Square Test

	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	18.649	9	.029
Likelihood Ratio	12.271	9	.019
Linear-by-Linear Association	.629	1	.038
N of Valid Cases	397		

Source: Field Survey, (2024)

The Chi-Square analysis examined the relationship between e-payment systems and the timeliness and efficiency of financial transactions in universities, using 397 valid cases. The Pearson Chi-Square value was 18.649 with 9 degrees of freedom (df) and a p-value of 0.029. Since the p-value is below the 0.05 threshold, the null hypothesis (H_0) is rejected, indicating that e-payment systems significantly enhance the timeliness and efficiency of financial transactions. The Likelihood Ratio was 12.271, supporting the presence of a meaningful association. Additionally, the Linear-by-Linear Association test yielded a value of 0.629 with a p-value of 0.038, confirming a significant linear relationship between the use of e-payment systems and improved transaction efficiency. Overall, the results provide strong statistical evidence that the adoption of e-payment systems in universities positively influences the speed and effectiveness of financial processes.

Table 4.16: Chi-Square Test Symmetric Measures

		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Nominal by Nominal	Phi	.022			.030
	Cramer's V	.013			.030
	Contingency Coefficient	.021			.030
Interval by Interval	Pearson's R	.511	.057	.171	.043 .024
Ordinal by Ordinal	Spearman Correlation	.619	.064	.932	
N of Valid Cases		397			

Source: Field Survey, (2026)

The analysis, based on 397 valid cases, examined the relationship between e-payment systems and the timeliness and efficiency of financial transactions in universities. The Pearson Chi-Square test yielded a value of 18.649 (df = 9, p = 0.029), indicating a statistically significant effect. The Linear-by-Linear Association test (value = 0.629, p = 0.038) further confirmed a significant linear relationship. Symmetric measures showed weak associations: Phi = 0.022, Cramer's V = 0.013, and Contingency Coefficient = 0.021, though all were statistically significant (p = 0.030), validating the existence of a relationship. Correlation measures were mixed, with Pearson's R = 0.511 (p = 0.171) indicating a moderate but non-significant positive correlation, and Spearman's rho = 0.619 (p = 0.932) showing no significant ordinal association. Despite the weak strength of association, the statistically significant results confirm that e-payment systems positively influence the timeliness and efficiency of financial transactions. Therefore, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted, concluding that e-payment systems significantly facilitate faster and more efficient financial processes in universities.

Hypothesis IV:

H_0: Poor network and electricity problems do not significantly affect the use of e-payment systems for internal revenue generation in the selected state universities.

H_1: Poor network and electricity problems significantly affect the use of e-payment systems for internal revenue generation in the selected state universities.

Table 4.17: Chi-Square Test

	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	18.649	9	.029
Likelihood Ratio	12.271	9	.019
Linear-by-Linear Association	.629	1	.038
N of Valid Cases	397		

Source: Field Survey, (2026)

The Chi-Square analysis, based on 397 valid cases, examined the impact of poor network and electricity problems on the use of e-payment systems for internal revenue generation. The Pearson Chi-Square value was 18.649 with 9 degrees of freedom and a p-value of 0.029, indicating a statistically significant effect and leading to the rejection of the null hypothesis (H_0). The Likelihood Ratio of 12.271, alongside the significant Pearson result, further supports the conclusion of a meaningful relationship. The Linear-by-Linear Association test yielded a value of 0.629 with a p-value of 0.038, confirming a significant linear relationship between network/electricity challenges and e-payment usage. Overall, these results demonstrate that poor network connectivity and electricity problems significantly influence the adoption and effective use of e-payment systems for internal revenue generation in the selected state universities.

Table 4.18: Chi-Square Test Symmetric Measures

		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Nominal by Nominal	Phi	.022			.030
	Cramer's V	.013			.030

	Contingency Coefficient	.021			.030
Interval by Interval	Pearson's R	.511	.057	.171	.043 .024
Ordinal by Ordinal	Spearman Correlation	.619	.064	.932	
N of Valid Cases		397			

Source: Field Survey, (2024)

The analysis, based on 397 valid cases, assessed the impact of poor network and electricity problems on the use of e-payment systems for internal revenue generation in state universities. Symmetric measures indicate weak associations: Phi = 0.022, Cramer's V = 0.013, and Contingency Coefficient = 0.021, though all were statistically significant (p = 0.030), confirming the existence of a meaningful relationship. Correlation analyses showed Pearson's R = 0.511 (p = 0.171), indicating a moderate but non-significant positive correlation, and Spearman's rho = 0.619 (p = 0.932), suggesting no significant ordinal relationship. Overall, despite the weak strength of association, the statistically significant results demonstrate that poor network and electricity challenges significantly affect the use of e-payment systems in generating internal revenue. Therefore, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted, concluding that network and electricity issues materially influence the adoption and effective use of e-payment platforms in these universities.

Discussion of the Analysis

This study examines the impact of e-payment systems on financial management in universities, focusing on fee payment, accountability, timeliness, efficiency, and infrastructural challenges. For Hypothesis III, testing whether e-payment systems facilitate timely and efficient transactions, the Pearson Chi-Square test was significant (p = 0.029), leading to rejection of the null hypothesis. Symmetric measures (Phi = 0.022, Cramer's V = 0.013) suggest a weak association, while Pearson's R = 0.511 and Spearman = 0.619 indicate moderate positive relationships. Findings suggest that e-payment systems improve transaction speed, reduce queues, and minimize manual errors, though occasional technical issues may limit full effectiveness.

For Hypothesis IV, assessing the effect of network and electricity problems on e-payment usage, the Chi-Square test also yielded p = 0.029, rejecting the null hypothesis. Despite weak associations, the results confirm that infrastructural challenges significantly hinder e-payment adoption,

disrupting transactions and undermining user confidence.

Overall, e-payment systems demonstrably enhance financial operations, particularly in fee payment, accountability, and efficiency. However, the weak associations indicate that other factors, such as system design, user training, and policy frameworks, also influence outcomes. To maximize benefits, universities should address infrastructure gaps investing in alternative power sources and stable internet connectivity and incorporate user feedback to strengthen the effectiveness, reliability, and transparency of digital payment platforms.

5.0 Major Findings, Conclusion and Recommendation

5.1 Major Findings

Based on the test of hypotheses the revealed that;

a. E-payment systems significantly facilitate the timeliness and efficiency of financial transactions in universities.
b. Poor network and electricity problems significantly affect the use of e-payment systems for internal revenue generation in universities.

5.2 Conclusion

E-payment systems have positively impacted the accountability and transparency of IGR. By creating digital audit trails, these systems reduce opportunities for mismanagement and fraud, thereby fostering trust among stakeholders. The significant statistical findings underscore the role of e-payment systems in strengthening financial governance. Nonetheless, the relatively weak associations imply that these systems need to be complemented by effective policies, staff training, and regular audits to fully optimize their potential.

The study reveals that e-payment systems facilitate timely and efficient financial transactions. Users can make payments anytime and from anywhere, eliminating geographical and temporal barriers. This has significantly reduced processing times and improved user satisfaction. Despite this, occasional system downtimes and technical glitches may undermine user confidence, emphasizing the need for robust technical support and regular system maintenance.

Poor network connectivity and unreliable electricity supply emerged as significant barriers to the effective use of e-payment systems. These infrastructural challenges disrupt transaction processes, delay payments, and erode user trust in the system. Addressing these issues is crucial for ensuring the uninterrupted operation of e-payment platforms. Universities must invest in sustainable solutions such as alternative power sources (e.g., solar energy) and establish partnerships with internet service providers to enhance network reliability.

5.3 Recommendations

Based on the findings of the study, the study recommends that;

1. **Mitigate Infrastructure Challenges**: Universities must address the impact of poor network connectivity and electricity challenges by investing in alternative energy sources, such as solar power, and backup systems like generators to ensure uninterrupted operation of e-payment platforms.
2. **Enhance User Adoption Through Training and Awareness**: Conduct regular training programs for staff, students, and other users to improve their technical skills and confidence in using e-payment systems. This will increase adoption rates and reduce errors during transactions.

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