The cost-convenience paradox: How merchant fees shape electronic payment adoption among micro, small, and medium enterprises and their customers in Lusaka, Zambia

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ABSTRACT

The adoption of electronic payments has emerged as a key element in the strategy for promoting financial inclusion throughout sub-Saharan Africa. However, the complex fee structures imposed on merchants present a significant obstacle to the uptake of these methods, particularly in informal economic environments. This research investigated the impact of merchant fees on the choice to utilize electronic payment systems among micro, small, and medium enterprises (MSMEs), as well as their customers in Lusaka, Zambia. In this setting, we must recognize that 95.6% of MSMEs operate without formal documentation, yet payment service providers charge numerous costs for every digital exchange. The study was guided by a dual theoretical framework combining Transaction Cost Economics (TCE) and the Technology Acceptance Model (TAM), which together informed the analysis of both the economic efficiency trade-offs and the behavioral dimensions of electronic payment adoption. The study utilized a combined approach, mixing both methods, collecting numerical data from the targeted population comprised of MSMEs operating in Lusaka's formal and informal commercial sectors who were registered with or using services of Payment Aggregators (Konse Konse 543, Kazang, Izwe Pay) and Mobile Network Operators (Airtel Money, MTN MoMo), as well as adult consumers transacting with these businesses. A sample of 200 customers and 100 MSMEs was selected using random sampling across groups, further supported by nine in-depth discussions with specific MSME personnel. The statistical assessment employed chi-square tests and Spearman's rank correlations within SPSS version 27, while descriptive information was examined using reflective subject-based techniques. The findings revealed that 93.5% of patrons used mobile money, primarily through Airtel Money, and seventy-three point five percent participated in card payments at physical checkout locations. However, seventy-five percent of consumers bore the transaction charges personally, and sixty-eight percent of MSMEs acknowledged that these charges affected their usage choices. Despite the generally high levels of use, fifty-two percent of MSMEs passed the exchange costs onto those they served, with seventy-two percent expressing a preference for alternatives with lower charges. The descriptive review made clear that fees between two percent and three point five percent were viewed as cutting MSME profits by amounts varying from fifteen percent to thirty percent. The research introduces the concept of the cost-convenience paradox, highlighting the coexistence of substantial usage statistics alongside challenges regarding fees. Additionally, it offers a detailed framework that integrates Transaction Cost Economics (TCE) with the Technology Acceptance Model (TAM) to enhance the understanding of the mutual adoption of electronic payment systems in low- and middle-income countries (LMICs). Key factors such as varying levels of education and income were identified as significant elements influencing adoption choices ($p < 0.05$). Recommendations for policy development focus on limiting charges, modifying prices to align more closely with industry needs, ensuring transparency, and supporting specific digital skills training programs.

Keywords: Cost-Convenience Paradox, Digital Financial Services, Electronic Payments, Financial Inclusion, Merchant Fees, Mobile Money, MSMEs, Transaction Cost Economics, Technology Acceptance Model, Zambia

I. INTRODUCTION

The worldwide growth of digital financial services (DFS) has significantly changed the structure of trade. Currently, more than 80% of businesses across the globe accept digital payments (Alliance for Financial Inclusion, 2024), while about 65% of transactions in physical stores worldwide are completed through mobile and contactless means (Crouzet et al., 2023). Thus, electronic payment methods have become the primary way economic activities are conducted. In sub-Saharan Africa, this growth has been especially notable: mobile money solutions have emerged as a key element in efforts for financial inclusion, with countries such as Kenya, Ghana, Nigeria, and South Africa witnessing substantial increases in mobile money transaction volumes over the last ten years (Amoah et al., 2023; Kimonye & Muchelule, 2024; Tshishonga, 2023).

Zambia plays a crucial role in this evolution. Between 2017 and 2022, mobile money transactions surged by over 800%, and the value of these transactions grew by nearly 4,000% during the same timeframe (Bank of Zambia, 2023). The level of DFS utilization among adults in Zambia has recently reached around 44.4%, propelled by mobile

money services like Airtel Money and MTN MoMo and boosted by government efforts such as the 'Go-Cashless' initiative and the Bank of Zambia's (BoZ) National Payment Systems Vision and Strategy for 2023–2027 (Bank of Zambia, 2023). Research shows a strong link between mobile money usage and the growth of micro, small, and medium enterprises (MSMEs) in Zambia, indicating improved operational efficiencies and enhanced market accessibility (Sinkala, 2023). Digital financial services account for a substantial and growing share of transaction volume among Zambian MSMEs that have adopted these technologies (Bank of Zambia, 2023).

Lusaka, recognized as Zambia's central business center, is leading the way in the growing trend of digital currency usage. The city accommodates over 60% of the country's small businesses, which include micro, small, and medium-sized enterprises, and it has the highest number of digital payment solutions and informal economic activities in Zambia, as noted in the 2023 report published by the Bank of Zambia. Additionally, Lusaka is the main site for the launch of cutting-edge payment solutions from various providers, such as MTN Mobile Money, Airtel Money, and payment platforms like Konse Konse 543, Kazang, and Izwe Pay, along with local banks. Nevertheless, despite having robust infrastructure and favorable policies, merchants in Lusaka do not widely use electronic payment options when compared to other types of digital financial services, including fund deposits and withdrawals—this observation stems from the Bank of Zambia's National Payment Systems Vision and Strategy document covering 2023 to 2027.

1.1 Statement of the Problem

Despite the rapid growth of Digital Financial Services (DFS) in Zambia, merchant fee structures remain a significant and underexplored barrier to electronic payment adoption, particularly among MSMEs. With approximately 95.6% of MSMEs operating informally (Banda & Hapompwe, 2023), transaction fees of 2%–3.5% and fixed mobile money withdrawal charges of ZMW 1.10 per transaction erode already thin profit margins of 15%–30%. When merchants absorb these costs, profitability suffers; when transferred to customers, 52% of whom already bear the charges themselves, demand for electronic payment declines creating negative outcomes for both parties (Bank of Zambia, 2023). Compounding this are opaque and inconsistently communicated fee changes, limited PSP competition in some areas, and digital literacy gaps among low-income and informally educated merchants.

These dynamics directly undermine Zambia’s financial inclusion goals, including reducing cash dependency, expanding credit access, and realising the cashless economy vision set out in Vision 2030 (Bank of Zambia, 2023; COMESA Business Council, 2021). Despite growing regional literature on digital payment adoption, no Zambian study has applied an integrated TCE–TAM framework to jointly examine how fee levels, structures, and transparency shape adoption decisions for both merchants and consumers. This study addresses that gap.

1.2 Research Objectives

i. To analyse the types of merchant fees charged on electronic payments in Lusaka, Zambia.
ii. To examine how merchant fees influence MSMEs’ and customers’ decisions to adopt electronic payment methods in Lusaka, Zambia.
iii. To evaluate alternative transaction models that could reduce fee burdens among MSMEs and customers in Lusaka, Zambia.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Transaction Cost Economics (TCE) and the Technology Acceptance Model (TAM)

Transaction Cost Economics (TCE), which was introduced by Ronald Coase and later expanded by Oliver Williamson, provides a framework for analyzing how the costs associated with economic transactions such as searching, negotiating, monitoring, and enforcement impact decisions related to organizations and governance (Cuypers et al., 2021; Nagle et al., 2025). In the context of electronic payments, TCE suggests that merchants will choose digital systems when the cost advantages, such as the elimination of cash handling, diminished opportunistic behavior, and direct settlement, outweigh the associated fees. Elevated fees for merchants raise enforcement and negotiation costs, which lowers the net efficiency benefits from digital transactions compared to cash and steers rational decision-makers toward less costly options, including cash (Cisar et al., 2025).

The Technology Acceptance Model (TAM), formulated by Fred Davis in 1986, elucidates the acceptance of new technologies by users through two main components: perceived usefulness (PU) the extent to which a technology is regarded as enhancing performance perceived ease of use (PEOU) the extent to which it is thought to require little effort to use (Marikyan & Papagiannidis, 2024). Within the payment landscape, fees act as a mediating factor that actively modifies both components: when fees are seen as reasonable in relation to the benefits received, PU is strengthened; conversely, when fees are unclear, excessive, or poorly communicated, both PU and PEOU are weakened, leading to a reduced intention to adopt (Aburbeian et al., 2022). The combination of TCE and TAM in the current

research enables a thorough evaluation of both the economic efficiency and the factors affecting behavioral perception regarding adoption, offering more substantial explanatory capabilities than either model independently, particularly within informal contexts in low and middle-income countries (LMIC) where practical cost considerations and subjective perceptions of technology interact in a dynamic manner.

2.2 Empirical Review

Merchant fees are the different charges that payment service companies charge to help with online payments. These can include interchange fees, merchant service fees, gateway fees, and various levels of withdrawal charges. (Bain, 2024; Occhiutto, 2020) Within the African setting, these charges hold significant relevance as they impact the already limited profit margins of micro, small, and medium enterprises. According to Miller-Wise and their research team in 2025, even a 1% merchant discount rate poses a considerable challenge for informal vendors in Africa. Diaz (2025) identified that elevated fees were a primary barrier preventing small businesses in developing nations from transitioning to a cashless payment system.

The circumstances in Ghana provide important insights. In the year 2023, Amoah and his team of researchers examined how willing people were to pay the costs related to electronic transactions. Their findings indicated that various fees from point-of-sale (POS) systems, mobile money services, and gateway expenses piled up, which reduced the attractiveness for both sellers and buyers. In a similar vein, Kimonye and Muchelule (2024) in Kenya found that the current fee structure of M-Pesa played a significant role in determining the success of electronic payments in commercial banks, while also adding extra costs for small business owners. Additionally, Tshishonga (2023) in South Africa pointed out that transaction fees, costs associated with point-of-sale systems, and gateway charges created obstacles for small businesses trying to participate in the formal digital economy.

A significant distinction is presented in the study conducted by Mustapha et al. (2025), who observed a positive connection between seller expenses and the performance level of SMEs across Nigeria. They proposed that these costs could encourage acceptance if transferred to consumers or if benefits from digital management improved overall operations significantly. Similarly, Kilay et al. (2022) found that digital payment systems enhanced the efficiency of MSME supply chains in Indonesia, even when considering the related expenses. These results highlight the variability and context-specific nature of fee impacts and stress the importance of examining the unique economic environment in Zambia.

Despite the increasing volume of regional research on the adoption of digital payments and the structures of merchant fees in sub-Saharan Africa, there is a lack of in-depth empirical studies focused specifically on Zambia. Recent research in Zambia by Sinkala (2023) found that mobile money fees and gateway costs are major components of the fee structure. Lupiya and Mwange (2025) examined how cashless payment methods affect the financial success of micro, small, and medium enterprises (MSMEs). Additionally, Musantu et al. (2025) explored the acceptance of digital payments in the aftermath of the COVID-19 pandemic. Nevertheless, no research has utilized a combined Transaction Cost Economics-Technology Acceptance Model (TCE-TAM) framework to comprehensively analyze how fee levels, structures, and transparency collectively influence adoption choices for both merchants and consumers in Lusaka. Notably, no study has conceptualized or empirically tested the cost-convenience paradox, which refers to the observed coexistence of high nominal adoption rates along with constraints on adoption driven by fees, as a theoretical framework within the Zambian or similar low- and middle-income country (LMIC) contexts. This research aimed to fill these gaps through a thorough dual-sided, mixed-methods approach.

III. METHODOLOGY

3.1 Research Design

A mixed-methods approach with a convergent design was utilized (Creswell & Plano Clark, 2018), facilitating the concurrent gathering and synthesis of both quantitative and qualitative information. This design was most appropriate for the study because the research objectives required both the breadth of statistical generalizability and the depth of contextual understanding. A purely quantitative approach would have captured adoption rates and fee sensitivity patterns but would have failed to explain the underlying motivations, coping strategies, and subjective perceptions that drive merchant and customer behaviour. Conversely, a qualitative-only approach could not have established the statistical associations between demographic variables and adoption decisions needed to inform policy. The convergent mixed-methods design allowed quantitative findings (e.g., chi-square and Spearman's correlations) to be triangulated with qualitative themes derived from in-depth interviews, thereby strengthening both the validity and the practical applicability of the conclusions. Given the complexity of the cost-convenience paradox—where high nominal adoption coexists with fee-driven constraints—this integrated approach was uniquely suited to capture the full empirical picture.

3.2 Study Area and Population

The research took place in Lusaka, the economic center of Zambia, selected due to its hosting of more than 60% of the nation's MSMEs, having the greatest concentration of digital payment systems, and serving as the main location for the interaction between PSPs and MSMEs in Zambia. The focus group included MSMEs that were integrated by Payment Aggregators (Konse Konse 543, Kazang, and Izwe Pay) and Mobile Network Operators (Airtel Money, MTN MoMo), alongside adult consumers engaging in transactions with these businesses in the Lusaka District.

3.3 Target Population

The target population comprised MSMEs in Lusaka registered with or using services of Payment Aggregators (Konse Konse 543, Kazang, and Izwe Pay) and Mobile Network Operators (Airtel Money and MTN MoMo), as well as adult consumers conducting electronic transactions with these businesses within the Lusaka District.

3.4 Sampling and Sample Size

Stratified random sampling was utilized to choose 100 MSMEs, with their proportions corresponding to PSP categories, along with 200 customer participants categorized by their income levels. Purposeful sampling was conducted to identify nine MSMEs for detailed interviews, which ensured diversity in aspects such as business type, size, location, and operational history. Structured questionnaires comprising Likert-scale, yes/no, and multiple-choice questions were given to the surveyed participants. A semi-structured interview method was employed to gather qualitative insights, focusing on perceptions related to fees, strategies for managing costs, experiences with settlements, and knowledge of alternative models. The validity of the content was confirmed through evaluations by two experts and two professionals from the payment sector before the data collection began.

3.5 Data Collection Tools and Procedure

Structured questionnaires comprising Likert-scale, yes/no, and multiple-choice questions were administered to MSME and customer survey participants. A semi-structured interview guide was employed to gather qualitative insights from nine purposively selected MSMEs, focusing on perceptions of fees, cost management strategies, settlement experiences, and awareness of alternative models. Content validity was confirmed through evaluation by two subject-matter experts and two payment industry professionals prior to data collection. Data were collected through field visits to MSMEs and consumer intercepts across Lusaka’s commercial zones between October and January 2025/2026.

3.6 Data Analysis and Presentation

Quantitative data were analyzed using SPSS v27. The Kolmogorov-Smirnov tests showed that the continuous variables did not follow a normal distribution (with p values less than 0.05 in all cases), which means we used non-parametric statistical methods instead. Chi-square tests were used to check if there was a connection between different groups of people based on their characteristics and the types of fees they had. Spearman's rank correlation (rho) was used for ordinal variables, and the result was considered statistically significant if the p-value was less than 0.05. The reliability of the scales was checked using Cronbach's alpha, which gave a score of 0.82 for the customer scales and 0.78 for the MSME scales. Qualitative data were analyzed using Braun and Clarke's 2006 reflexive thematic analysis approach. This process led to the identification of six main themes through repeated coding. The findings were checked by peers to ensure agreement, with a reliability score of $\kappa = 0.81$. The results were also compared with quantitative data using triangulation to confirm consistency. Member-checking was conducted to strengthen credibility.

3.7 Ethical Considerations

Ethical clearance was obtained from the University of Zambia Research Ethics Committee prior to data collection. All participants provided informed written consent before taking part in the study. Participation was entirely voluntary and respondents were free to withdraw at any time without consequence. Confidentiality was maintained throughout the research process, and all data were anonymised before analysis to protect participant identity. No personally identifiable information is reported in the findings.

IV. FINDINGS & DISCUSSION

4.1 Descriptive Statistics: Electronic Payment Usage

Among the 200 surveyed customers, 93.5% reported utilizing mobile money, predominantly Airtel Money, while 73.5% made payments via a POS terminal or card. A significant number of individuals frequently engaged in electronic payments: 44% indicated they always use these methods, and 30% stated they use them regularly, whereas merely 3% claimed they never utilize electronic payment options. Regarding transaction fee responsibilities, 75% of customers indicated they covered the costs themselves, 8.5% mentioned the costs were shared, and 16.5% reported that

merchants carried the full expense. A majority, at 58.5%, expressed satisfaction with their electronic payment experiences; however, 41.5% were dissatisfied, primarily due to issues related to transaction fees and the perceived reliability of the payment methods.

Among the 100 small and medium enterprises surveyed, 98% indicated that they accept Airtel Money, while 75% stated that they accept MTN MoMo. A significant 46% of these businesses reported that 76 to 100 percent of their sales were generated through electronic payment methods, and an additional 27% stated that they achieved 51 to 75 percent of their sales through digital channels. This data illustrates that electronic payments are deeply embedded in the financial operations of small and medium enterprises. The majority, specifically 51%, reported processing over 200 electronic transactions monthly. The typical transaction values ranged from ZMW 101 to 200, which was noted by 30% of the MSMEs, and from ZMW 201 to 500, which was recognized by 27%. Furthermore, 90% of respondents identified that they encountered fees when withdrawing money via mobile services, and 68% reported that these fees influenced their choice to utilize mobile money options.

Table 1

Customer Electronic Payment Usage and Satisfaction (n = 200)

Variable	Category	n	%
Payment Method Used	Mobile money (Airtel Money)	187	93.5
	POS/Card payment	147	73.5
Frequency of Use	Always	88	44
	Regularly	60	30
	Never	6	3
Fee Responsibility	Customer pays	150	75
	Shared	17	8.5
	Merchant pays	33	16.5
Overall Satisfaction	Satisfied	117	58.5
	Dissatisfied	83	41.5

Table 2

MSME Electronic Payment Usage Patterns (n = 100)

Variable	Category	n	%
Payment Platforms Accepted	Airtel Money	98	98
	MTN MoMo	75	75
Proportion of Sales via E-payment	76–100%	46	46
	51–75%	27	27
Monthly Transaction Volume	Over 200 transactions/month	51	51
Typical Transaction Value	ZMW 101–200	30	30
	ZMW 201–500	27	27
Withdrawal Fee Awareness	Encountered withdrawal fees	90	90
Fee Influence on Behaviour	Fees influenced usage decisions	68	68

4.2 Fee Structures and Their Impact on MSME Behavior

MSMEs outlined a complex fee structure that includes various elements: transaction fees based on a percentage (ranging from 2% to 3.5% of the transaction amount), fixed charges for mobile money withdrawals (ZMW 1.10 for each transaction), costs for renting POS terminals or fees per transaction, and additional gateway fees from payment aggregators. Merchants qualitatively described these fees as detrimental to profits, which already operate on narrow margins of 15% to 30%. A significant portion, 52%, passed these charges onto customers, while 72% indicated they would consider switching to options with lower fees if those alternatives existed.

Among these MSMEs, 42% mentioned that they sometimes advised customers against electronic payments in order to sidestep fees, contrasting with 53% who never took such a stance, illustrating the complex decisions merchants made in regard to fees. The monthly financial burden varied significantly: 35% of MSMEs faced fixed fees that exceeded ZMW 10 monthly, while businesses with higher turnover (over ZMW 50,000 per month) experienced larger percentage-based deductions. Delays in settlement, especially for transactions made through agent lines, intensified concerns regarding fees; some MSMEs reported waiting one to three business days, which hindered their ability to manage working capital effectively.

Table 3

MSME Fee Structures and Behavioural Responses (n = 100)

Variable	Category	n	%
Fee Pass-Through Behaviour	Pass fees to customers	52	52
	Absorb fees internally	48	48
Switching Intention	Would switch to lower-fee alternatives	72	72
Advisory Behaviour	Sometimes advise against e-payments	42	42
	Never advise against e-payments	53	53
Monthly Fixed Fee Burden	Fixed fees exceed ZMW 10/month	35	35
Settlement Delays	Experienced 1–3 business day delays	N/A	Qualitative

In spite of these challenges, a small fraction of MSMEs had formally contested fee charges with their service providers, indicating an established acceptance of these costs. As one participant expressed:

> *"I recognize that there are expenses linked to electronic transactions, which I categorize as miscellaneous expenses. " (MSME2, 29 January 2026)*

Another participant highlighted the mixed nature of the cost-benefit analysis:

> *"I benefit from using electronic payments since the money is immediately transferred to my bank account. . . However, the downside is the incurred costs. In situations involving an agent mobile line, there is a cost attributed to the customer that might dissuade them. " (MSME9, 30 January 2026)*

4.3 Demographic Correlates of Fee Sensitivity

Table 4 presents the chi-square and Spearman's correlation results for MSME demographic characteristics and fee influence on adoption decisions.

Table 4

Demographic Correlates of Merchant Fee Influence on MSME Electronic Payment Adoption (n = 100)

Demographic Variable	Test Used	Statistic	p-Value	Strength & Direction	Significant (α=0.05)
Gender	Chi-square (χ^2)	3.21	0.073	—	No
Education Level	Spearman's ρ	22.45	0.001	Moderate positive	Yes
Business Location	Chi-square (χ^2)	18.67	0.001	—	Yes
Business Type	Chi-square (χ^2)	26.89	<0.001	—	Yes
No. of Employees	Spearman's ρ	19.34	<0.001	Strong positive	Yes
Monthly Turnover	Spearman's ρ	24.78	<0.001	Moderate–strong positive	Yes
Years in Operation	Spearman's ρ	12.56	0.014	Moderate positive	Yes

For customers, education level showed a significant moderate positive correlation with fee sensitivity ($\rho = 18.34$, $p < 0.001$), with tertiary-educated respondents more likely to switch to cash when fees were perceived as excessive. Monthly income was significantly associated ($\chi^2 = 20.12$, $p < 0.001$), with lower-income customers (<ZMW 1,000/month) most deterred by additional fee charges, and higher-income customers (ZMW 10,000+/month) most tolerant of fee-bearing arrangements.

For MSMEs, education level ($\rho = 22.45$, $p = 0.001$), monthly turnover ($\rho = 24.78$, $p < 0.001$), number of full-time employees ($\rho = 19.34$, $p < 0.001$), and years in operation ($\rho = 12.56$, $p = 0.014$) were all significantly associated with the degree to which fee levels influenced adoption decisions. Business type ($\chi^2 = 26.89$, $p < 0.001$) and geographic location ($\chi^2 = 18.67$, $p = 0.001$) were also significant: service-sector and high-density-area businesses exhibited greater fee awareness and adaptive behavior, reflecting their higher transaction volumes and greater exposure to mobile money infrastructure.

4.4 Qualitative Themes

From the nine detailed interviews with MSMEs, six significant themes surfaced, each contributing distinct perspectives to the quantitative findings. The initial theme, focusing on the equilibrium between expenses and ease, underscored the main challenge identified in the research: electronic payment systems provided operational advantages such as improved security, direct bank transactions, enhanced market presence, and access to corporate clients, which motivated their ongoing utilization despite the associated high fees. The second theme, which involved the strategic selection of payment methods to control costs, revealed that MSMEs did not merely adopt or reject payment options at random. Rather, they made deliberate choices regarding specific payment methods suitable for various types of transactions; for instance, they might opt for mobile payments when dealing with larger corporate transactions while favoring cash for smaller face-to-face sales.

The third theme, which highlights customer demand as a driving force, revealed that a significant inclination among customers for digital payment options, particularly from international clients, paid staff, and users of mobile money, generated substantial market pressure. This demand was powerful enough to eclipse any concerns regarding fees, leading merchants to continue providing electronic payment solutions rather than eliminating them. The fourth theme, focusing on delays in settlements and the intricacies of reconciliation, identified challenges that extended beyond mere fees: the lag in making funds accessible via agent lines created difficulties with managing working capital, while varying fee structures resulted in accounting errors and complicated financial planning.

The fifth theme highlighted the challenges in communication from PSPs. It revealed that despite the initial explanation of fees during the onboarding process, there was insufficient ongoing communication regarding changes in fees. For instance, unexpected hikes in the costs associated with transferring money from a wallet to a bank account were not always communicated in advance. This situation led to dissatisfaction among merchants and caused a decline in their trust. The sixth theme addressed the concerns of merchants regarding the imposition of uniform fees across all types of businesses, which failed to consider the varying capabilities of different sectors to absorb these expenses. This resulted in an inequitable scenario, particularly affecting food vendors and small service providers, who have limited financial resources to accommodate additional fees.

4.5 Discussion

4.5.1 The Cost-Convenience Paradox: Theoretical Implications

The primary theoretical finding of this research is the concurrent existence of elevated nominal adoption rates along with persistent, fee-related obstacles to adoption, which is referred to in this study as the cost-convenience paradox. Although 93.5% of users engage with mobile money and 46% of micro, small, and medium enterprises (MSMEs) earn the majority of their revenue electronically, both demographics face significant fees that impede broader, fair, and sustainable adoption. This finding challenges oversimplified explanations regarding the spread of innovation, in which adoption is depicted as a two-way situation and high adoption figures are seen as signs of a robust system. Rather, this paradox reveals that relying solely on adoption statistics is insufficient for evaluating the quality or long-term viability of involvement in the digital payment environment.

The paradox involves three interconnected elements. Initially, the motivation for adoption stems from practical reasons instead of inherent value: MSMEs utilize electronic payment methods due to pressure from customer requests, obligations from corporate partners, and market demands rather than because adopting these methods offers a financial advantage through fee structures. This aligns with Transaction Cost Economics (TCE), which posits that decisions on governance are a result of limited optimization rather than ideal efficiency: businesses choose electronic payments in spite of associated fees because the repercussions of not adopting such methods, including the potential loss of corporate clients and unsatisfied customer expectations, would be even more detrimental. Next, adoption is selective and contingent: merchants purposefully control their exposure to fees by encouraging cash transactions for specific types while promoting electronic payments for others, leading to a situation of partial adoption that is more susceptible than overall data may suggest. Lastly, adoption is not uniformly spread: MSMEs located in areas with low turnover, limited education, and high density face greater fee challenges and show more restricted adoption patterns, revealing that the overall improvements in adoption hide considerable disparities within the population.

4.5.2 TAM Constructs Under Fee Pressure

The constructs of perceived usefulness and perceived ease of use in the Technology Acceptance Model (TAM) were significantly influenced by fee structures in this research. Merchants who considered the fees fair in relation to the advantages gained, especially those with higher sales, better digital skills, and the ability to receive direct bank settlements, held positive views about adoption. In contrast, merchants with tighter profit margins, particularly in food sales and informal services, indicated a lower sense of both usefulness (as fees diminished the profit gains of digital adoption) and ease of use (due to complications in reconciliation and delays in settlement leading to operational challenges).

This result enhances the application of TAM in understanding payment adoption in low- and middle-income country (LMIC) settings in a significant manner. Fee structures are not just outside factors that affect adoption alongside perceived usefulness and perceived ease of use; they fundamentally change the internal aspects of these concepts. A merchant facing errors in reconciliation due to fees doesn't just perceive electronic payments as less convenient; their view of the system's usefulness is fundamentally changed by the fees. This indicates that TAM models for payment scenarios in LMICs should clearly include variables related to fee levels and fee transparency as internal factors influencing perceived usefulness and perceived ease of use, rather than considering them merely as external influences.

4.5.3 Alignment with and Departure from Regional Evidence

The results from Lusaka significantly align with the trends observed in sub-Saharan Africa. The structured fee categories in Ghana (Amoah et al., 2023) resemble the multi-tiered cost landscape found in Lusaka. The leading role of M-Pesa in Kenya (Kimonye & Muchelule, 2024) is similar to the importance of Airtel Money within the mobile money framework of Lusaka. The financial pressures faced by MSMEs in South Africa (Tshishonga, 2023) demonstrate similar structural inequalities. In contrast, the situation in Nigeria, where Mustapha et al. (2025) identified fees linked to enhanced SME outcomes, might be indicative of Nigeria having a larger established MSME sector with better margin protections, robust consumer purchasing power to handle fee increases, or more substantial transaction volumes that lessen the effect of fees on a per-transaction basis. The environment in Lusaka, which mainly involves informal, low-profit, and densely populated trade, seems to create a scenario where fees are seen as barriers rather than something manageable a critical difference that has significant consequences for applying Nigerian policy models to the context in Zambia.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study revealed that charges set by merchants serve as a significant, prevalent, and fundamentally unresolved barrier to the widespread acceptance of electronic payments in Lusaka, even in a context where the nominal adoption rates are high. The primary finding and theoretical contribution of this research indicates that while the cost-convenience paradox fees do not completely prevent adoption, they do limit its scope, equity, consistency, and sustainability over time. Data concerning adoption that categorizes any engagement with electronic payment as 'adoption' misleadingly misrepresents the actual level of participation: for 52% of MSMEs that pass on fees to customers, for 42% that sometimes obstruct electronic transactions, and for 41.5% of users dissatisfied with their experience concerning fees, 'adoption' signifies a fragile, conditionally accepted scenario rather than a reliable behavioral outcome.

5.2 Recommendations

The findings generate four evidence-grounded policy recommendations, each directly addressing a mechanism through which fees constrain adoption. The findings support four evidence-grounded policy recommendations. First, the Bank of Zambia should implement a mandatory fee cap below 1% for MSME transactions under ZMW 500, directly addressing the most acute fee burden on small-value, high-frequency transactions that constitute the majority of informal market commerce in Lusaka. Second, Payment Service Providers should be required to offer differentiated, sector-sensitive fee structures that reflect margin heterogeneity across business types, providing lower rates for food retail, informal services, and micro-enterprises with monthly turnovers below ZMW 10,000, thereby eliminating the structural pricing inequity of applying uniform Merchant Discount Rates across businesses with vastly different cost-absorption capacities. Third, the Bank of Zambia should mandate that PSPs provide real-time, point-of-transaction fee disclosure to both merchants and customers, together with advance notice of any fee structure changes, addressing the communication deficits that were a primary source of merchant distrust and reconciliation failures documented in this study. Fourth, targeted digital financial literacy programs for primary-educated, low-turnover MSME operators should be embedded in the Bank of Zambia's and Ministry of MSME's financial inclusion programming, covering fee structure comparison, PSP negotiation strategies, and awareness of lower-cost alternative transaction models.

REFERENCES

Aburbeian, A. M., Owda, A. Y., & Owda, M. (2022). A technology acceptance model survey of the metaverse prospects. *AI, 3*(2), 285–302. https://doi.org/10.3390/ai3020018

Alliance for Financial Inclusion. (2024). *Special report: Driving digital financial services in Africa through merchant acceptance of digital payments*. AFI.

Amoah, A., Kwablah, E., Amoah, B., & Adjei-Mantey, K. (2023). Willingness to pay for electronic transaction levy: Empirical evidence from Ghana. *African Journal of Economic and Management Studies, 14*(4), 663–679.

Bain, R. (2024). *Types of fees and costs*. APEXX Global.

Banda, F., & Hapompwe, C. (2023). An assessment of informal sector's business registration patterns: Nature and size among micro, small and medium enterprises in Lusaka. *Journal of Economics, Finance and Management Studies, 6*(1), 342–357. https://doi.org/10.47191/jefms/v6-i1-39

Bank of Zambia. (2023). *National payment systems vision and strategy 2023–2027*. BoZ.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Cisar, D., Schellinger, B., Stoetzer, J. C., Urbach, N., Weiß, F. L., Gramlich, V., & Guggenberger, T. (2025). Designing the future of bond markets: Reducing transaction costs through tokenization. *Electronic Markets, 35*(1), Article 9.

COMESA Business Council. (2021). *The business case for a regional digital payments policy for MSMEs in COMESA*. CBC.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.

Crouzet, N., Gupta, A., & Mezzanotti, F. (2023). Renting to own? Financing of consumer durables and the role of fintech. *Journal of Financial Economics, 149*(2), 444–472.

Cuypers, I. R., Hennart, J. F., Silverman, B. S., & Ertug, G. (2021). Transaction cost theory: Past progress, current challenges, and suggestions for the future. *Academy of Management Annals, 15*(1), 111–150.

Diaz, J. (2025). Transitioning to a cashless economy: Drivers and inhibitors of electronic payment system adoption among micro, small, and medium enterprises. *International Journal of Management, Knowledge and Learning, 14*, 161–178.

Kilay, A. L., Simamora, B. H., & Putra, D. P. (2022). The influence of e-payment and e-commerce services on supply chain performance. *Journal of Open Innovation: Technology, Market, and Complexity, 8*(3), 119.

Kimonye, E. K., & Muchelule, Y. (2024). E-payment system and financial performance of commercial banks in Nairobi County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship, 8*(4), 754–768.

Lupiya, R., & Mwange, A. (2025). An empirical investigation of the effect of cashless transactions on the financial performance of MSMEs at Carousel Shopping Mall, Lusaka, Zambia. *Journal of Economics, Finance and Management Studies, 8*(5), 2751–2760.

Marikyan, D., & Papagiannidis, S. (2024). *Technology acceptance model: A review*. TheoryHub.

Mastercard. (2021). *Mastercard partners with Digital PayGo to drive secure payments for SMEs in Zambia*. Mastercard Newsroom.

Miller-Wise, H., Pillai, R., & Faz, X. (2025). Breaking the cash habit: The urgent need to accelerate digital merchant payments. *CGAP Blog*.

Musantu, J., Nkhowani, J., & Phiri, D. (2025). Post COVID-19 MSME digital payment acceptability and utilisation: Was the pandemic a forced pilot? *Journal of Economics and Sustainable Development, 16*(4), 45–60.

Mustapha, K. I., Onimole, S. O., & Adebusoye, A. B. (2025). Effect of electronic payment system usage on performance of small and medium enterprises in Ilorin metropolis, Kwara State. *JABU International Journal of Social and Management Sciences, 9*(2), 93–110.

Nagle, F., Seamans, R., & Tadelis, S. (2025). Transaction cost economics in the digital economy: A research agenda. *Strategic Organization, 23*(2), 351–365.

Occhiutto, K. (2020). The cost of card payments for merchants. *RBA Bulletin*, March.

Sinkala, T. (2023). Mobile money and MSME performance in Zambia: Empirical evidence from Lusaka. *African Journal of Finance and Management, 12*(1), 34–52.

Tshishonga, A. P. (2023). *Financial inclusion through digital payments in South Africa* [Doctoral thesis, University of South Africa].