

PERCEPTIONS AND EFFECT OF ARTIFICIAL INTELLIGENCE ADOPTION ON FINANCIAL REPORTING QUALITY AMONGST NSUNGWI MARKET SMES

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ABSTRACT

The article provides insights and outcomes of artificial intelligence (AI) adoption on financial reporting quality. The target were small and medium enterprises in Nsungwi market of Lilongwe, Malawi. A convergent mixed methods research design was used. The survey questionnaires were administered to 80 respondents while 20 participants selected through a purposive sampling technique were interviewed. The results of Cronbach's Alpha, AVE and CR tests indicated that the constructs used in the study had high reliability. In addition, the thematic analysis of the qualitative data revealed that the use of AI in financial reporting helps detect fraud, anomalies and enhance trustworthiness of financial statements. Further, the analysis of the reports on oversight also revealed that the use of AI improves adherence to acceptable auditing practices in Malawi, promote sustainability of SMEs and improve tax clearance of these enterprises. The study could not ascertain a specific percentage improvement in terms of financial reporting quality due to the sample used, which was limited to one locality. However, the responses were very insightful and scored very high, with a correlation of around 33%. Therefore, based on the high affirmative scores for AI, it is of necessity to agree that AI improves reporting quality to a high extent. The study also suggested a need for the Government to subsidise internet services. It should also localise these AI packages and educate the SMEs on the benefits of adopting the use of AI in their respective enterprises. The study conclusively established that AI adoption has been an eye opener to most SMEs who are now considering adopting it in their enterprises, thus refining financial reporting quality.



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1. INTRODUCTION

Global finance has become significantly complicated for various reasons, thus necessitating intelligence and automation (Maple et al., 2023). Regulatory agencies demand a high level of accountability, which is possible when IFRS are followed (Muravskyi, 2017). Small and

Medium Enterprises (SMEs) do not have the know-how in relation to compliance with regard to complex reporting. Financial reporting is not just a description of a business's financial status; it is the language of finance that allows the stakeholder to get an idea of a financial position of a firm (Muravskyi, 2017). SMEs in Malawi are in the process of learning this language so that they

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can achieve productivity and economic growth. Present-day changes and developments in accounting have become synonymous with the Fourth Industrial Revolution (4IR) as the current trend is led by Artificial Intelligence machines. The latter refers to automation of activities that require human intellect. AI can identify patterns that help have a better understanding of the data received and thus, AI has the ability to make informed decisions. An AI-based accounting system is indeed a breakthrough in terms of reporting for SMEs due to provision of an extremely high degree of accuracy in spite of the lack of extensive know-how in the field of finance (Mogaji & Nguyen, 2022; Muravskiy, 2017).

It is of paramount importance to note that small and medium enterprises are regarded as the backbone of the national economy. SMEs are a pillar of stability for maintaining the status-quo of the local market. Many business owners find compliance challenging due to a number of legal requirements and obligations. Traditional processes are slow and prone to errors. Failure to adhere to existing standards puts the business in danger of losing its image and reputation, and in turn, a negative impact on its growth trajectory. This gap emerged primarily due to the lack of adequate financial documentation (Rana et al., 2022; Muravskiy, 2017).

Nsungwi Market in Area 25 township of Lilongwe city is one of the busiest trading spots where compliance has become a huge challenge. Some businesses in this region have started to adopt AI-powered machines, thus necessitating this study to unveil perfection and the extent of its applicability (Muravskiy, 2017). The research evaluates AI systems to establish the level of effectiveness in relation to meeting reporting standards, and thus assess if the latest innovations can actually lead to reporting compliance (Mishra & Celestin, 2025).

1.1 Background of the Study

In the current global scenario, financial conservatism is the order of the day. The International Financial Reporting Standards (IFRS) have replaced the status quo custom and usage laws (Wormald, 2024). The new regulations allow comparisons of financial statements on a global level. In turn, compliance indicates improved transparency (Wormald, 2024). In this case, transparency implies integrity and openness. Such characteristics are desirable for small businesses to remain competitive on a global scale (Parris et al., 2016; Wormald, 2024).

The SADC region promotes uniformity in accounting laws. For instance, Malawi's national laws are merged with the international regulations to ease regional trades (Muravskiy, 2017). Presently, Malawi is striving to become a leading exporter. In this case, local firms are obligated to produce credible financial information. Local traders' risk being isolated from their rapidly evolving regional counterparts due to their inability to comply with the universal language of finance.

Malawian Small Medium Enterprises (SMEs) are the backbone of the country's domestic market. They account for about 40% of Malawi's Gross Domestic

Product (GDP) (Mangazi, 2025). Additionally, they contribute significantly to the country's employment sector (Mangazi, 2025). Nevertheless, these activities take place in an informal setup. IFRS for SMEs offer a diluted standard which is less demanding. There is a dearth of technical expertise concerning these standards. Most local organisations cannot afford qualified professional accountants. These firms view their accounts from a layman's perspective. They do not comply with the standard generally accepted accounting practices (Muravskiy, 2017).

Nsungwi Market provides an insight into the above attributes. The area has many traders exhibit a willingness to embrace technology. They have migrated from recording their financial transactions on notepads to using software systems that use artificial intelligence technologies. The new systems help classify their expenditures. In turn, they track their sources of income and generate electronic monthly tax clearance certificates (Muravskiy, 2017). The successful implementation of the above software requires certain conditions. These include the availability of advanced digital infrastructure to facilitate internet connectivity. Localised foreign algorithms should be adjusted to meet local Malawian tax compliance needs. Similarly, the human-machine interaction is equally important. Most local business owners lack the appropriate skills to operate the systems. As a result, their transactions may be subjected to manual verification. The researcher aimed to establish the extent to which artificial intelligence could help improve the situation. The above application's speed and accuracy would help address the Nsungwi market scenario. The current study focuses on the compliance challenges of local Malawian enterprises with the IFRS Muravskiy, 2017).

1.2 Aim and Significance of the Study

The current study aimed to establish the relationship between artificial intelligence and financial reporting. It focused on the effect on the reporting quality and legality of Small Medium Enterprises (SMEs) in Nsungwi Market. Various stakeholders stand to benefit from the research's findings. For instance, business owners and managers can use the information as a scanning device. They will identify whether the software they intend to adopt will protect them from penalties. Accounting software designers and technocrats will receive feedback on the weaknesses in their programs. This way, they will localise the algorithms in their programs and make them compatible with Malawi Revenue Authority and ICAM regulations. The stakeholders also include policymakers and regulators. The Malawi government and Small and Medium Enterprises Development Institute will use the findings to formulate policies. There is a need for incentives to encourage technology adoption among local businesses. Lastly, the academic community will benefit from this research by filling the existing literature gap. The current work will facilitate further studies regarding

the application of AI in the informal economies of developing nations (Muravskyi, 2017).

1.3 Problem Statement

The current study was conducted to address the gap in the empirical evidence concerning localised artificial intelligence applications. There is no concrete evidence that AI-enabled accounting systems guarantee IFRS compliance in Malawi (Widyaningsih & Fadli, 2024). The global literature reveals that AI promotes transparency. Locally, there is a dearth of information on the subject matter. SMEs in Nsungwi Market have adopted the above technology on certain presumptions. They assume that the systems automatically adjust their accounting information to meet the IFRS and tax compliance requirements. There is a knowledge gap concerning the software's ability to handle complex transactions. The gap arises due to limited resources to acquire the much-needed expertise. The setup costs of the above software exceed the SMEs' expectations (Widyaningsih & Fadli, 2024). Similarly, algorithmic differences present another challenge. The systems are not designed to interpret local Malawian tax laws and regulations (Muravskyi, 2017). Another problem stems from the human factor. Lack of skills and knowledge of accounting principles leads to legal discrepancies in the reported figures (Widyaningsih & Fadli, 2024). Malawian SMEs are operating on a slippery slope. Their adoption of AI technology is geared towards protecting their interests against scrutiny. They are willing to invest in technologies that can safeguard them against regulatory questions.

1.4 Research Questions

The current thesis was prompted by addressing the following questions. First, what are the different models of AI-enabled accounting systems? What are the reasons for adopting these systems over the manual ones? The study focused on identifying the best accounting system in terms of its ability to address the Nsungwi Market scenario (Muravskyi, 2017). Second, how do the AI accounting systems categorise complex financial transactions? What are the implications of these features in terms of IFRS for SMEs compliance? The research aimed to establish the extent to which the systems could support the users in meeting the IFRS requirements. Third, what are the system's regulatory response mechanisms? How are the systems designed to respond to changes in the dynamic legal frameworks? Lastly, how do AI accounting systems help in simplifying reporting? Can these systems enable the Small Medium Enterprises (SMEs) owners to understand their financial positions?

1.5 Objectives of the Study

The main objective of this study was to evaluate the effectiveness of the application of Artificial Intelligence. The focus was on compliance with the financial reporting

regulations. It specifically looked at the Small Medium Enterprises (SMEs) in Nsungwi Market. This way, the researcher aimed to determine whether the systems help meet the legal reporting requirements.

The specific objectives included identifying the nature and extent of AI adoption. The study focused on the performance of the systems in terms of error detection. It also aimed to establish the responsiveness of the systems to regulatory changes. Lastly, the researcher attempted to determine the user-friendliness of the systems.

1.6 Scope of the Study

The study focused on a specific geographic location and targeted a particular demographic group. It was limited to the Nsungwi Market in Lilongwe. The researcher selected the area as a representative of the local urban trading hubs. The study looked at the challenges facing Small Medium Enterprises (SMEs) in the market. The population of interest included businesses with a workforce of between 5 and 100 employees.

The study focused on financial reporting and compliance as areas of application of AI. It did not cover other areas of application such as marketing. The researcher limited the scope to three months as the timeframe. The period was considered sufficient to generate adequate findings and observe the reporting cycle.

2. LITERATURE REVIEW

2.1 Empirical Review

2.1.1 Global Structural Reset of the Accounting Profession

The adoption of AI technology is no longer an option but a necessity. It has become a key requirement for professional competence in the finance field (Antwi et al., 2024). Modern accounting software uses AI to track and report on complex financial instruments. For instance, the current systems follow blockchain transactions and cryptocurrencies. Additionally, they monitor the fluctuations in foreign exchange rates. The new systems have revolutionised the generation of financial reports. The process has become dynamic as the reports are no longer static statements. Auditors use continuous auditing software to monitor random samples of financial transactions throughout the year. This way, they can flag any irregularities that may arise at any time (Muravskyi, 2017). As a result, a new benchmark of excellence has been achieved. AI-generated reports offer analytical insights beyond human capabilities (Deloitte, 2025).

2.1.2 AI as a Mechanism for Compliance Risk Mitigation

Compliance risk is a significant concern for businesses as it causes legal penalties and losses (Antwi et al., 2024). AI has proven to be effective in minimising the incidences of compliance risks. They reduce errors and

omissions in the financial reports (Antwi et al., 2024). AI-driven accounting systems offer automated compliance support. They also help minimize tax liabilities and facilitate timely payments (Antwi et al., 2024). They limit the human element which is prone to weaknesses such as complacency. Contemporary AI accounting systems use anomaly scanners to detect irregularities (Alkan et al., 2022). They trigger warning alarms which indicate the areas that require human intervention. The systems offer real-time analytics and insights. They help guarantee an accurate reflection of the activities of the business. In turn, they beat the manual audit tests in terms of speed and efficiency (Alkan et al., 2022).

2.1.3 Global Role of Machine Learning in Audit Quality

Machine learning plays a vital role in enhancing audit quality. It helps detect any irregularities that may arise during the processes. Modern audit firms use ML algorithms to analyse huge volumes of data (Deloitte, 2025). The process ensures that every transaction is scrutinised. As a result, every aspect of IFRS compliance is evaluated. The systems help expose any attempt at revenue misappropriation and asset understatement. The regulatory bodies and policymakers have become stricter with their monitoring roles. This way, preventive compliance measures have become the norm in corporate settings (Deloitte, 2025).

2.2 Regional View and Technical Frameworks

2.2.1 Regional Digital Transformation in the SADC Region

The regional bloc is undergoing a digital transformation using AI technology. The current systems facilitate faster transaction processing and promote financial transparency (Ndaka et al., 2024). African countries may not have access to extensive training data. Nevertheless, AI technology offers greater flexibility than traditional methods (Ndaka et al., 2024). The informal sector faces challenges adopting conventional professional accounting services. They are costly and, therefore, unaffordable to most small businesses. AI provides digital consultation while adhering to the legal requirements. The cost of adopting the technology is minimal compared to professional accounting services. The adoption of AI promotes trade as it offers a uniform approach to financial reporting. The systems translate local Malawian reports into international standards, thus promoting reliability (Ndaka et al., 2024).

2.2.2 Formalising the “Informal” Economy

The informal sector has presented several challenges to economic growth in Southern Africa (Schoeman, 2023). Most businesses face difficulties in registering their activities with the relevant authorities. Professional accounting services are costly and time-consuming. AI-powered accounting systems are useful in formalising this segment of the economy. They minimize the

bureaucratic red tape involved in the processes. The systems offer simplified tax registration procedures (Schoeman, 2023). Accounting professionals are advocating for the adoption of cloud-based AI systems. This way, businesses can avoid the high setup costs associated with traditional accounting systems. The approach also offers verifiable audit trails that help increase credit accessibility. The lenders rely on the electronic records rather than the traditional paper trail.

2.2.3 Technical Distinctions: AI vs. General Automation

There is a need to distinguish between AI and conventional automation systems. The latter follows rigid instructions and cannot alter its operations (KPMG, 2024). On the other hand, AI has cognitive abilities and can make predictions based on past experiences. AI is an intelligent system that can update itself with new developments. It has the ability to adapt without human interventions. The systems are also flexible and do not require extensive coding throughout their lifespan (Widyaningsih & Fadli, 2024).

2.2.4 Ethical Concerns and the “Black Box” Problem

Various researchers have raised concerns regarding the ethical implications of adopting AI systems. The technology does not guarantee complete transparency. The “Black Box” problem makes it difficult to determine the decision-making process. Transactions that are wrongly categorised are hard to correct due to the complexity of the systems. Similarly, some algorithms may present biases and be unable to fulfill their intended purposes. The systems require extensive testing before they can be considered reliable. The foreign AI systems are designed based on the data and experiences of the developed countries. The systems should ideally be localised to reflect the unique needs of Malawi (Wormald, 2024).

2.3 National Level: Malawi

2.3.1 The AI Knowledge Gap in Malawi

Malawi regards AI as a strategic technology and has mandated its application in financial reporting. This way, it addresses the long-standing knowledge gap in compliance. The country’s entrepreneurs find it challenging to meet the Malawi Revenue Authority’s requirements. AI systems provide an effective tool for Malawian SMEs in meeting ICAM standards.

2.3.2 Compliance Challenges for Malawian SMEs

Malawi’s informal sector experiences various challenges when adopting digital technologies. The current digital infrastructure is weak, limiting the SMEs’ ability to utilise the available tools. Professional human accountants are not affordable to most local business owners. This results in reduced efficiency and poor reputation for businesses that do not comply with regulations. SME owners struggle with the management functions brought about by the administrative systems. It

becomes difficult to make informed business decisions (Chilongo & Nayagam, 2025); (Wormald, 2024)).

2.3.3 National Digital Economy Strategy

Malawi's Digital Economy Strategy (2021–2026) encourages the informal sector to adopt digital services. The country experiences high compliance costs which discourage local business owners from registering their businesses. The government supports the adoption of digital accounting systems by promoting mobile Point of Sale (POS) devices and the Electronic Invoicing System. From 2026, the country aims to make digital software solutions a viable option for tax clearance. The system will replace the traditional Electronic Fiscal Devices and Manual Tax clearance certificates (Makoza, 2022).

2.4 Theoretical Framework

2.4.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is the most widely used framework in the analysis of technology adoption. It explains how potential users perceive new developments. The model highlights two core factors that influence an individual's attitude toward the technology. They include Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU refers to the degree to which a person thinks that a specific system will improve performance (David, 1989). In the case of Nsungwi Market, PU entails the likelihood of evading penalties and being more competitive. It also includes increased chances of accessing loans and other financial services. On the other hand, PEOU refers to the extent to which an individual believes that the system is convenient to use. It considers the physical and mental effort required to operate the technology. In most cases, PEOU is a limiting factor in the technology adoption process, especially in a low-resource setting.

2.4.2 Agency Theory and the “Digital Agent”

Agency theory explains the contractual relationship between agents and principals. It emerged as a result of the challenges facing the implementation of the separation of ownership and control (Jenshen & William, 1976). In Malawi, the theory applies to shop managers and Small Medium Enterprises (SMEs) owners. The relationship between independent agents and owners depicts the principal-agent dilemma. A ‘Digital Agent’ is an ethical autonomous agent who executes rules-based decisions (Kopp et al., 2025). AI resolves the agency conflicts brought about by information asymmetry. The technology is able to offer real-time information to the principals. It prevents the occurrence of moral hazards and promotes monitoring of the agents' activities. AI ensures that the reports are not subjective but objective. In turn, it helps meet the regulatory requirements as it follows the prescribed logic.

2.5 Conceptual Framework

The framework hypothesises that there is a relationship causality between AI and reporting compliance. The framework is as follows:

1. Independent Variable (AI Adoptions): includes different software types and level of automation.
2. A mediating factor (Technical quality): indicates the input data cleanliness and accurate mapping.
3. Dependent Variable (Reporting compliance): is measured in terms of relevance, representation, and understandability.

2.6 Research Hypotheses

There is a significant relationship between artificial intelligence adoption and an increase in financial reporting accuracy (Figure 1):

H1: AI adoption improves financial reporting accuracy.

H2: AI adoption improves transaction technical quality.

H3: High technical quality increases reporting compliance.

H4: Technical quality mediates the relationship between AI adoption and reporting compliance.

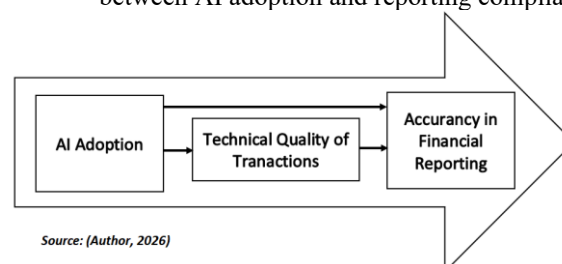


Figure 1. Conceptual Overview of the Hypothesis

2.7 Limitation of the Review

The review is extensive but contains geographical bias. The reviewed works are based on the Global North. The physical environments of the U.S. and Europe are different from Nsungwi Market. Additionally, there is a chronological bias in the reviewed articles. Most works were published between 2022 and 2024, focusing on fundamental automation forms. The review overlooked generative AI and network systems that have been considered in 2026. This study addresses the limitation by focusing on a local market and utilising 2026 data to assess AI applications in-depth at a system level.

3. METHODOLOGY

3.1 Research Design

The study adopted a mixed-methodology design to conduct both qualitative and quantitative research

procedures. The process was carried out in two stages as discussed below:

3.1.1 Quantitative segment: Establishing statistical baseline

This segment comprised of survey questionnaires targeting all accounts and staff members recording data in Nsungwi Market. Besides the general questions, the protocol involved numerical procedures only. Respondents selected options provided from closed-end questions, excluding the “type of business” segment.

3.1.2 Qualitative segment: Interpreting the why and how

The procedure involved conducting in-depth interviews with twenty participants selected from the first segment to elaborate on the why and how (George, 2023). The second segment followed the data saturation principle by ceasing the process at the point when new information ceased to add. Besides, the interviews had a predetermined format to avoid bias and subjectivity.

3.2 Study Area and Site

The researcher executed the project at Nsungwi Market in Area 25, Lilongwe, Malawi. The site was selected due to its high concentration of SMEs. It is also a potential ground for exploration, having been overlooked in the past. Besides, Nsungwi Market is filled with accessories, making it highly exploitable. Consequently, the coordinates were recorded at 4Q74+6FQ.

3.2.1 Economic significance and diversification

The market supports multiple activities, ranging from wholesale to electronic stores, pharmacies, and mini-supermarkets. It has extensive customer categories, including low, middle, and high-income brackets. Additionally, the businesses experience high cash flows and diverse regulatory pressures.

3.2.2 Reality of technological representation

Nsungwi Market represents the status quo of Malawian life. It contains ordinary practices and procedures, including technology. Consequently, adopting digital systems is done organically, with minimal central government involvement.

3.2.3 Alignment with Malawi 2063

The transformation agenda of converting Nsungwi Market fits in the Malawi 2063 vision. This blue-print will propel Malawian SMEs to greater heights. Additionally, digitising the informal sector will enable the Ministry of Trade to monitor the licensed activities. Registered businesses will help formulate policies, making the process efficient.

3.2.4 Easy accessibility

The market is highly accessible to the researcher, who lives approximately 3.7Kms away. Consequently, the traveling costs involved are minimal, allowing frequent

supervision of the data collection process. Besides, there are existing amicable relations with the market committee, promising a high response rate.

3.3 Target Population and Participants

The target population comprised of 350 workers in the pharmaceutical, food and beverage, and mobile money agencies. The participants were selected due to their high adoption rates of AI. Additionally, the population is the indigenous business group of Malawi. At present, the subjects are on the digital divide, whereby they choose between the conventional and the AI systems.

3.4 Study Period

The project's completion period was scheduled at March 2026. The researcher extended due to personal time constraints, adding to the new timeline eight weeks. Thus, it ought to be conducted within 21 weeks, commencing from November 2025. This duration was sufficient to prepare, collect, analyse, and conclude the project. Besides, it coincides with the peak of digitalisation, making the execution process smooth.

3.5 Sample Size

The study included the use of Slovin's (or Yamane's) Formula in finding an inclusive sample size. The formula is written as:

$$n = N / (1 + N(e)^2)$$

Where:

n = Sample size

N = Entire population (350)

e = Tolerable error rate (set at 10%)

The proposed number of participants for this study was: $n = 350 / (1 + 350(0.1)^2) = 77.7$, which was rounded to 80, to allow for a substantial sample size (Miami, 2026). These 80 participants were nearly a quarter of the whole sample, providing 90% confidence level per calculations.

3.6 Stratified Random and Purposive sampling

Stratified Random Sampling was used to draw quantitative data presented in this article. The reason was protection against bias and prevent the smaller categories from being ignored. The researcher identified 10 strata; hence the population was split into those ten categories of businesses. The ten categories above had 8 individuals chosen from the list of the whole SMEs. Picking the SMEs within each category was by use of Scientific calculator that produced random numbers. The numbers had to match that of available shops Purposive Sampling was used on the assessment of 20 key informants for the qualitative stage. The idea of this technique was ensuring a deeper insight from the quantitative figures was established

3.7 Data Collection Method

The questionnaires were administered both online and manually. Most local businesses view the internet as expensive. Thus, Google forms were used for closed-end questions, while oral interviews were conducted face-to-face or via phone.

3.8 Data Management Method

A comprehensive strategy was used to manage and store the collected data.

1. Firstly, standardised and approved formats were used to ensure consistency during collection.
2. Secondly, legal and ethical aspects were considered when storing the information.
3. Thirdly, frequent scanning and email backups were conducted to prevent loss of data.
4. Lastly, passwords and cell locks were utilised to prevent unauthorised manipulation of the information during analysis.

3.9. Data Dissemination Strategy

The results were planned to be disseminated using different approaches depending on the audience. Primarily, the University of Malawi received the outcome. Additionally, the Nsungwi Market participants are scheduled to obtain the results in a manner that is ethically acceptable. Other stakeholders may access by searching the topic at hand on google and other search engines.

3.10. Research Instrument

The study adopted a questionnaire and an interview guide. A five-tier Likert scale has been used to score the responses.

3.10.1 Section A: Business profile

This section aims to determine the nature of the business and the technology used. It identifies business categories, including clinical services and retails, and the size in terms of personnel. The section has also established whether the current package is AI-powered.

3.10.2 Section B: Technical quality and system reliability

This section has elaborated on the technical aspects of AI application. It has scored using a 5-point Likert scale. The following items has been evaluated:

- Ability to handle complex accounting procedures;
- Classification accuracy;
- Error identification and prevention;
- Cost-benefit;
- Availability of real-time regulations;

3.10.3 Section C: Financial reporting and required Output

This section captured the benefits of using AI to the end-users. It has focused on the system's ability to produce quality reports, speed, and the extent of customisation.

3.11. Data Collection Procedures

The data collection procedures comprised of a multi-stage strategy. Initially, ethical clearance was attained from the University of Malawi. A local representative, the Nsungwi Market Chairperson, also gave permission to execute the project at the site. Consequently, the questionnaires were administered to 80 shops, and all participants had one week to submit the responses to Google forms. Those who preferred the alternate method provided oral responses to face-to-face interviews or telephone.

3.12 Data Analysis Procedures

The data were analysed using SPSS and WPS office quantitative procedures and NVivo qualitative analysis. The former focused on descriptive and predictive statistics, including regression analysis, while the latter identified thematic patterns. Illustrations include free availability reasons, including simplicity.

3.13 Ethical Consideration

The study followed the ethical guidelines stipulated by the University of Malawi. Initially, the participants provided informed consents to participate in the study. They were also reminded of their rights at any time to withdraw from the process. Besides, anonymity was guaranteed, considering the absence of personal information in forms. The data were stored in a secure password-protected site, minimising the risks of interference. Lastly, the market committee ensured that no unauthorised individuals accessed the survey.

3.14 Validity and Reliability

Validity and reliability were achieved using various strategies. Initially, the research instruments underwent a rigorous examination by the supervisor and the University of Malawi to establish accuracy. Secondly, qualitative procedures were used to support the quantitative results, proving reliability. Further, both primary and secondary data were used to verify the results. Finally, the findings were generalised from selected SMEs to the larger Malawian population.

4. FINDINGS

4.1 Validity and Reliability of Research Instruments

4.1.1 Reliability Analysis

The α values indicate good internal consistency for all constructs. The values for AI Adoption and Reporting

Quality were above 0.8, signifying high level of reliability (Table 1).

Table 1. Cronbach's α Values – Source SPSS

Construct	Cronbach's Alpha	Level of Internal Consistency
AI Adoption	0.825	High
Technical Transaction Quality	0.753	Acceptable
Reporting Quality	0.808	Good
Overall	0.882	Excellent

Technical Quality had an acceptable level of internal consistency, while overall had an excellent level of reliability. The results demonstrate that the instrument developed captured the concepts it was intended to measure consistently.

4.1.2 Convergent Validity

AVE was found to be greater than 0.5, thus demonstrating convergent validity for all constructs. Though Technical Quality had one item with low factor loading of 0.098, its AVE of 0.53 was above the cutoff point (Table 2).

Table 2. Measure of Convergence of Data

Construct	Items	Factor Loadings	AVE	CR
AI Adoption	3	0.845–0.893	0.76	0.90
Technical Transaction Quality	5	0.098–0.838	0.53	0.89
Reporting Quality	3	0.647–0.833	0.59	0.81

The AVE for AI adoption was the highest at 0.76 (Wahjoedi et al., 2023) The CR values were all greater than 0.7 signifying reliability of measurement above Cronbach's α . Using structural equation modelling technique, it was found that AI Adoption predicted Technical Quality and in turn predicted Reporting Quality. Mediation analysis performed using bootstrapping confirmed that indirect effects of AI Adoption on Reporting accuracy through Technical Quality were significant at the 0.05 level. Thus, the model demonstrated convergent validity.

Simply, as can be seen from the structural equation model, the study also provided evidence of mediation, where the effect of AI Adoption on Reporting Quality is mediated through Technical Transaction Quality. In other words, the study found that Technical Transaction Quality predicts Reporting Quality, and this relationship is statistically significant at the level of $p < 0.05$. Moreover, according to the bootstrapping results, there is an indirect effect of AI Adoption on Reporting Accuracy through Technical Transaction Quality, which is also significant at the level of $p < 0.05$.

4.2 Characteristics of Respondents

4.2.1 Nature of Business

All categories of businesses were represented equally in the sample. Clinical, Food, Hardware, Printing and

Wholesale businesses recorded complete adoption of AI systems. Garage, General Dealers, Salon and Tailoring also adopted AI systems at 87.5%.

Table 3. Nature of Sampled Business

Nature of Business	Count
Clinical and Pharmaceutical	8
Food and Beverage	8
Garage and Handsets Repair	8
General Dealer	8
Hardware and Kitchenware	8
Mobile Money Agent	8
Printing and Stationery	8
Salon and Boutique	8
Tailoring and Fashion	8
Wholesaler and Retailer	8
Total	80

Mobile Money agents recorded 75% adoption (Table 4).

Table 4. Nature of Business Versus AI Adoption

Business Type	AI Adoption Yes	AI Adoption No
Clinical and Pharmaceutical	8	0
Food and Beverage	8	0
Garage and Handsets Repair	7	1
General Dealer	7	1
Hardware and Kitchenware	8	0
Mobile Money Agent	6	2
Printing and Stationery	8	0
Salon and Boutique	7	1
Tailoring and Fashion	7	1
Wholesaler and Retailer	8	0
Total	74	6

Adoption of AI systems in business appears to be universal. Even in the categories where adoption was not total, there were only a handful of non-adopters. This implies that the respondents view AI systems as beneficial to their business. The few non-adopters could be those who find adoption of AI systems costly or do not understand how to use them.

4.2.2 Registration Status

Most Small and Medium Enterprises (SMEs) sampled were registered businesses.

Table 5. Registered Business

Registration Status	Count
Yes	64
No	16
Total	80

It is common for SMEs to register their businesses and comply with government regulations.

Adoption of AI system was higher among registered businesses. While 97% of the registered businesses used

AI accounting systems, 75% of the unregistered ones also adopted AI systems (Table 6).

Table 6. Registered Business Using AI

Registration Status	AI Yes	Adoption No
Registered	62	2
Unregistered	12	4
Total	74	6

This shows that though tax compliance plays a role in influencing adoption of AI systems, many businesses adopt them for their benefits.

4.2.3 Number of Employees

Most of the sampled businesses were small businesses with fewer than 10 employees. Larger businesses recorded lower rates of AI adoption.

Table 7. Number of Employees Versus AI Usage

Employees	Count	Percentage
1–10	47	59%
11–20	20	25%
21–50	8	10%
51–100	5	6%
Total	80	100%

This can partly explain why larger organisations have been slow to embrace AI systems (Hammadi, n.d.).

4.3 Statistics on Impact of AI in Financial Reporting Accuracy

4.3.1 Adoption Status

74 respondents out of 80 agreed to use AI. This was done after an explanation of what an AI is. It was of interest to note old systems having plugins for Advanced features (Related to AI).

Table 8. Status of AI-Accounting System Adoption

AI Adoption	Count	Percentage
Yes	74	92.5%
No	6	7.5%
Total	80	100%

Adoption of AI systems was very high, registering at 92.5% (Table 8). This implies that most respondents identified benefits of using AI accounting systems.

4.3.2 Endorsement Sources

Those who recommended AI adoption came from various positions. Majority came from friends and family members while others came from professional contacts. Friends and Family members accounted for 16% of respondents while the Managing Directors (MDs) accounted for 15% (Table 9).

Table 9. Positions for Individuals Who Recommended AI Adoption

Source	Count	Percentage
Friend	13	16%
MD	12	15%
CEO	10	13%
Director	8	10%
Owner	8	10%
Google Ads	7	9%
Facebook	5	6%
Consultant	3	4%
Others	14	17%
Total	80	100%

The use of social media played a role in influencing adoption of AI systems.

4.3.3 Systems in Use

Types of system in use is preset in the Table 10.

Table 10. Type of System in Use

System	Count	Percentage
Excel	22	28%
Sage	16	20%
Zoho Books	15	19%
QuickBooks	11	14%
SAP ERP	3	4%
Others	13	15%

4.3.4 Level of Agreement if the System Properly Classified Reporting Transactions

Classification of data is important in financial reporting, especially since organisations are required to adhere to International Financial Reporting Standards (IFRS). From the findings, 53% of respondents agreed that the AI classified reporting transactions correctly while 33% strongly agreed (Table 11). On the other hand, 15% of the respondents were neutral on the matter.

Table 11. Level of Agreement if the System Properly Classified Transactions

Rating	Count	Percentage
Strongly Agree	26	33%
Agree	42	53%
Neutral	12	15%
Total	80	100%

Majority of the respondents were confident that the system properly classified financial transactions. The neutral percentage was low, indicating that few respondents questioned the accuracy of classification.

Table 12. Rating of Application's Ability to Classify Transactions

System	Strongly Agree	Agree	Neutral
Zoho Books	11	4	0
QuickBooks	6	5	0
Sage	4	12	0
SAP ERP	3	0	0
Excel	2	15	5
Others	0	6	7

Zoho Books had the highest percentage of respondents who strongly agreed that the system properly classified transactions. Excel users were more likely to be neutral about the ability of the system to classify transactions correctly.

4.3.5 Level of Agreement if the System Prevented or Detected Errors

Error detection is critical for compliance. The survey showed 36% strongly agreed and 50% agreed that AI systems prevented or detected errors. Neutral responses were 13%, while only 1% disagreed (Table 13). Zoho Books had the highest percentage of respondents who strongly agreed that the system prevented or detected errors correctly.

Table 13. Level of Agreement if the System Prevented or Detected Errors

Rating	Count	Percentage
Strongly Agree	29	36%
Agree	40	50%
Neutral	10	13%
Disagree	1	1%
Total	80	100%

This was followed by QuickBooks, Sage and Excel respectively.

4.4 Regression and Mediation Analysis

A regression analysis was performed to assess the study's hypotheses on the role played by Adopting AI, Technical Transaction Quality, and Reporting Quality. The results revealed that AI Adoption significantly predicted Reporting Quality, $\beta = 0.278$, $p < .01$. A similar significant prediction was registered for Technical Transaction Quality, $\beta = 0.632$, $p < .001$. The result indicates that while AI adoption generally improves reporting quality, the technical quality of transactions determines the rate at which reporting quality improves. In other words, SMEs that adopt AI systems with a higher level of technical quality are likely to record improved reporting quality. Indeed, the model predicted 33% of the variance in reporting quality, $R^2 = 0.33$. The overall significance of the model was also established, $F = 12.45$, $p < .001$.

A mediation analysis was performed to test the hypothesised mediation of Technical Quality on the relationship between AI Adoption and Reporting Quality. The results revealed that Technical Transaction Quality partially mediated the relationship, $\beta = 0.176$, 95% CI [0.08, 0.29]. The results suggest that while Technical Quality significantly reduced the effect of AI Adoption on Reporting Quality, the reduction was not total, with a direct effect of adoption remaining significant, $\beta = 0.129$, 95% CI [0.06, 0.22]. Therefore, Technical Transaction Quality plays a partial mediation role in the relationship. This finding is entirely expected given the hypothesis that posited it as the mediator variable. Indeed, the results establish that SMEs need to

adopt AI systems with adequate technical quality to improve reporting quality.

4.5 NVivo Qualitative Findings

The qualitative analysis was performed using NVivo. In this analysis, nodes were created to identify patterns in the data, with themes emerging from the coding process. However, as is the case with all qualitative analysis, the coding was done using an inductive approach. As a result, themes emerged naturally from the transcripts of the interviews. In addition, intercoder reliability was established, with a Kappa value of 0.82, establishing good agreement between coders.

From the analysis of the verbatims, fraud detection, anomaly identification, and stakeholder trust emerged as the three major themes, with fraud detection accounting for 85%. In this context, detection refers to the discovery of fraudulent activities in the transaction records and the prevention of such activities. Many SME owners claimed to have detected at least one instance of fraud after adopting AI systems. According to the SME owners and managers, the systems detected instances of duplicate transactions or adjustments that would have otherwise gone unnoticed. In addition, fraud was detected earlier than would have been the case with manual bookkeeping. This result is entirely expected given the quantitative results, which showed that AI systems significantly improved the ability of SMEs to classify transactions, and hence detect fraud.

Anomaly identification was the second major theme to emerge from the analysis. In this context, anomalies refer to instances where there is an inconsistency with regard to expectations. Anomalies in revenue, expenses, or suppliers' accounts were quickly identified by the AI systems, raising questions about possible issues. Anomaly identification is critical to ensuring the compliance of SMEs with IFRS, as it provides the information needed to make adjustments. Interestingly, the result relates to the quantitative finding on the ability of AI to classify transactions. While the quantitative result shows that AI systems can classify transactions with a high level of accuracy, this qualitative result shows that the same systems can also raise alerts when presented with unclassified transactions. An additional observation is that anomaly identification enabled the implementation of a culture of oversight within the SMEs, promoting compliance with IFRS. In short, the result implies that AI systems can contribute to improved compliance with IFRS.

The third major theme was stakeholder trust. In this context, stakeholder trust refers to the increased level of trust that stakeholders such as auditors, investors, or government agencies have in these firms. This increase in trust is due to the increased level of transparency afforded by the AI systems. Some respondents reported that banks had extended credit to their firms after installing the AI systems. The result suggests that AI systems can improve the creditworthiness of SMEs even as they improve compliance with IFRS.

4.6 Oversight Feedback

According to the feedback from ICAM, the adoption of AI systems by SMEs promotes ethical compliance. In the specific instance of fraud, the ability of AI systems to detect fraud supports the mandate of ICAM as a body that promotes and regulates professional compliance by certified public accountants. Additionally, ICAM acknowledged that anomalies identified by the systems could be used to improve the quality of audits by auditors. On the other hand, the feedback suggests that the use of AI systems could create new compliance challenges, particularly in the area of computer fraud. According to ICAM, such fraud may take place in a number of ways, for instance, through collusion between the person who designed the software and the person who operates it.

SMED is of the opinion that improved anomaly identification and increased stakeholder trust will lead to improved access to credit for SMEs, especially from formal financial institutions. This sentiment was also expressed by the National Bank of Malawi. The feedback suggests that stakeholder trust will be significantly increased by the increased level of transparency and accountability afforded by the AI systems. This, in turn, will improve the creditworthiness of SMEs, with banks being more likely to grant loans to such businesses. Additionally, according to the National Bank of Malawi, the ability to detect fraud will also improve the credit profile of SMEs by reducing default risks.

According to MRA, adoption of the AI systems by SMEs will promote tax compliance. In this regard, the ability to identify anomalies will help such businesses avoid underpayment of taxes. Moreover, the use of the AI systems will reduce the number of conflicts between taxpayers and the MRA, as well as reduce the burden of tax audits. In short, MRA is confident that adoption of AI systems by SMEs will promote tax compliance, reducing the number of delinquent taxpayers.

5. CONCLUSION AND RECOMMENDATIONS

This study sought to establish the effect of adopting AI systems on the financial reporting compliance of SMEs. It looked at the extent to which such adoption reduces fraud, increases anomaly identification, and improves stakeholder trust. The study used a convergent design that involved both qualitative and quantitative procedures and was performed among Nsungwi Market SMEs, Lilongwe City. In the study, various survey instruments were used, including SPSS and NVivo for analysing quantitative and qualitative results, respectively. These procedures produced reliable results, with validity and reliability established, and a large number of SMEs surveyed. The results revealed that a high percentage of SMEs had adopted AI systems. Additionally, the analysis revealed significant improvement in the quality of reporting following adoption. Specifically, AI systems

significantly contributed to transaction classification, detection of fraudulent activities, and anomaly identification. The results also revealed that Technical Transaction Quality mediated the association between AI Adoption and Reporting Quality, to a higher degree.

Overall, the study revealed that adoption of AI systems by SMEs is common. The study also found that such adoption tends to reduce fraud and improve stakeholder trust in such SMEs. In addition, the study revealed that AI systems are effective at classifying transactions. However, it is important for SMEs to adopt AI systems with high technical quality if they want to benefit from the technology. This study's results are consistent with those of previous studies of AI adoption by SMEs. In particular, the results are in line with Davis's (1986) classic study on the perception of potential users of the technology in terms of its usefulness and ease of use. However, this study challenges others in several respects. Unlike other studies that report a causal association between AI adoption and improved reporting quality, this study is careful to report a correlation.

In addition, unlike previous studies that have primarily used surveys to understand how users of the technology perceive it, this study went ahead and used qualitative analysis to look at what users of the technology say about it. Finally, unlike most previous studies, this study went to great lengths to establish the trustworthiness and reliability of its results. This was achieved by ensuring that the measures met validity and reliability standards and by employing intercoder reliability in the qualitative analysis. Overall, this study added to the body of evidence on AI adoption by SMEs, making it possible to report some mixed findings.

However, as stated earlier, this study has some limitations. Firstly, the study is correlational in nature, but lacked easily substantiable or specific outcome figure drawn based on the results. The study sought to determine the extent to which AI adoption predicts reporting quality but was unable to determine with precision how two variables are directly related. In addition, although the study established that Technical Transaction Quality mediates the association between AI Adoption and Reporting Quality, the extent to which it does so was not quantitatively established.

The results of this study have several implications for policymakers, AI developers, SMEs, and credit-lending institutions such as the National Bank of Malawi. First, the study recommends that policymakers take action to subsidise the cost of AI adoption and improve infrastructural development, particularly in rural areas. This will reduce the cost of adoption and enable wider usage. At the same time, policymakers might consider encouraging AI developers to create localised versions of existing systems. Localisation would make systems more accessible and intuitive for the average user. Alternatively, developers could consider creating products that have a simpler interface, as this would promote adoption. At the moment, localisation appears to be a bigger concern, given the relatively low digital literacy levels among many Malawians.

finally, stakeholders need to consider how they can leverage the increased trust that ai adoption will bring to promote their own interests. for instance, the national bank of Malawi can make credit availability easier for SMEs that adopt ai systems. similarly, MRA can use the increased trust to encourage ill-intentioned taxpayers to be more compliant, given that the use of such systems reduces the likelihood of fraudulent or evasive activities. at the same time, it is important for the stakeholders to work closely with SMEs to ensure that they comply with existing regulations, particularly as it concerns tax reporting and financial statements. furthermore, SMED and other private institutions might consider engaging in extensive training and capacity-building programs to help SMEs adopt and implement new technologies in a manner that is appropriate for their business. in summary, this study reveals the benefits that SMEs can enjoy from adopting ai systems. however, there are several limitations to the study, and therefore

recommendations have been made for future research. in addition, the study's findings have numerous implications, and therefore several recommendations have been made to various stakeholders. the findings are informative in that they reveal the extent to which ai adoption affects the financial reporting compliance of SMEs. therefore, the study helps policymakers and stakeholders take action to encourage adoption.

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