Project Report

On

“Role of Accounting Information Systems in Fraud Prevention: Evidence from SMEs”

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Major: BBA in Accounting Information System
United International **University**

This report is submitted to the school of Business and Economics, United International University as a partial requirement for the degree fulfillment of Bachelor of Business Administration

“Role of Accounting Information Systems in Fraud Prevention: Evidence from SMEs”

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Submitted to:

Dr. James Bakul Sarkar
Professor
School of Business & Economics (SoBE)
United International **University**

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Date of submission: 11 March, 2026

Letter of transmittal

11th March 2026
Dr. James Bakul Sarkar
Professor
School of Business & Economics (SoBE)
United International University

Subject: Submission of Thesis Paper “Role of Accounting Information Systems in Fraud Prevention: Evidence from SMEs”

Dear Sir,

With due respect, I would like to submit my thesis paper titled “Role of Accounting Information Systems in Fraud Prevention: Evidence from SMEs” as a partial requirement for the completion of my BBA program at the School of Business & Economics, United International University.

I am grateful to the Almighty for granting me the ability to complete this research successfully. I would also like to express my sincere gratitude to you for your valuable guidance, constructive feedback, and continuous encouragement throughout the entire research process. Your insightful direction has greatly contributed to the successful completion of this thesis.

This study investigates the impact of Accounting Information Systems (AIS) adoption and internal control effectiveness on fraud prevention among SMEs in Dhaka, Bangladesh. The findings highlight the significant role of AIS and internal control mechanisms in reducing fraud exposure while identifying key barriers that hinder technology adoption in the SME sector.

I sincerely hope that you will find this research work informative and satisfactory. I remain deeply thankful for your support and for providing me the opportunity to work on this meaningful and relevant topic.

Sincerely,

Md. Mashfique Ahmed Chowdhury
Student ID: 114 221 003
BBA in AIS
United International **University**

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Declaration of the Student

It is hereby declared that:

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Special thanks are extended to all the SME owners, managers, accountants, and finance officers who generously participated in the survey and shared their valuable time and information. Without their cooperation, this research would not have been possible.

Finally, I would like to express my heartfelt gratitude to my family and well-wishers for their continuous moral support, encouragement, and understanding during the preparation of this thesis. Their support has been a constant source of motivation.

ABSTRACT

This study examines the role of Accounting Information Systems (AIS) in preventing financial fraud among Small and Medium Enterprises (SMEs) in Bangladesh. Using a quantitative survey approach, primary data were collected from 50 SME owner-managers, accountants, and finance officers in Dhaka. A structured questionnaire was used to measure AIS adoption levels, internal control effectiveness, fraud incidence, and barriers to AIS implementation. The data were analysed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis. The findings reveal that higher AIS adoption is significantly and negatively associated with fraud incidence ($r = -0.61$, $p < 0.01$), and that internal control strength is the most powerful predictor of fraud prevention outcomes ($\beta = -0.42$, $p < 0.01$). Financial constraints, skills shortage, and infrastructure limitations were identified as the primary barriers to effective AIS adoption. The study concludes that AIS represents a critical technological mechanism for fraud prevention in the Bangladesh SME sector, and provides practical recommendations for SME owners, policymakers, and accounting practitioners. The findings contribute original empirical evidence to a largely under-researched area in the context of developing economies.

Keywords: Accounting Information Systems, Fraud Prevention, SMEs, Internal Controls, Bangladesh, Quantitative Survey

Table of Contents

List of Abbreviation

Serial No.	Abbreviation	Full Form
1	**ACFE**	Association of Certified Fraud Examiners
2	**AIS**	Accounting Information System
3	**TAM**	Technology Acceptance Model
4	**COSO**	Committee of Sponsoring Organizations of the Treadway Commission
5	**ERP**	Enterprise Resource Planning
6	**GDP**	Gross Domestic Product
7	**IT**	Information Technology
8	**SMEs**	Small and Medium Enterprises
9	**SSRN**	Social Science Research Network

List of Tables

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The Bangladesh economy is supported by Small and Medium Enterprises (SMEs), defined as businesses with limited staff and revenue under local guidelines. SMEs account for about 25 percent of gross domestic product (GDP) and around 80 percent of the working population in industry (SME Foundation, 2022). As economically important as they are to developing economies, SMEs in Bangladesh and elsewhere are disproportionately susceptible to financial fraud, asset misappropriation, and accounting anomalies. According to the Association of Certified Fraud Examiners ACFE (2022), the median annual revenue of small organizations is lost to fraud at a rate of 5% of total revenue, which is especially shocking for resource-limited SMEs. According to previous studies, fraud risk is high when internal control systems are weak in SMEs (Hossain, 2025; Romney & Steinbart, 2021).

Accounting Information Systems (AIS) are inbuilt systems that integrate accounting processes, information technology, and controls to acquire, process, store, and report financial information (Romney & Steinbart, 2021). When properly implemented, AIS also offers automated controls, detailed audit trails, real-time transaction monitoring, and role-based access restrictions that, when combined, reduce the risk of fraudulent behavior. Empirical research indicates that successful AIS fosters stronger internal control and more powerful fraud prevention in SMEs (Wulandari et al., 2024). Nevertheless, there is still little empirical evidence on the effectiveness of AIS in curbing fraud among SMEs in developing countries such as Bangladesh.

The SME sector in Bangladesh has been slow to undergo digital transformation, although the government's Digital Bangladesh initiative promotes technology adoption in business processes (Bangladesh Bank, 2023). Many SMEs still use manual bookkeeping or simple accounting programs, which creates significant gaps in financial control. Research finds that greater AIS implementation enhances accounting information and organizational performance in SMEs (Alharasis, 2025). The current study addresses this gap by examining the relationship between AIS adoption and primary survey data on fraud prevention outcomes.

1.2 Statement of the Problem

Financial fraud represents a persistent and increasingly emerging problem for SMEs in Bangladesh. Frauds, such as embezzlement, manipulation of expenses, payments, and financial reports, have high financial and reputational costs for the affected businesses. The fundamental issue is that the majority of Bangladesh SMEs lack a well-developed Accounting Information System and rely on informal, manual, or semi-automated accounting mechanisms to track their financial operations, lacking the controls to prevent and detect fraud. Studies have shown that ineffective or poorly developed AIS and internal control mechanisms leave SMEs highly exposed to fraud risk (Tazilah & Hussain, 2015).

Although the academic literature increasingly acknowledges that SMEs can use AIS to prevent fraud, most available knowledge comes from research on developed economies or large companies. Empirical evidence shows that computerized AIS can significantly boost the effectiveness of fraud detection and control (Saeed and Hama, 2023), and broader assessments indicate that AIS effectiveness fosters a more effective control environment within organizations (Al-Okaily et al., 2020). However, researchers have not empirically examined AIS acceptance, internal control efficiency, and fraud prevention using primary data in the Bangladesh SME context. This study addresses that gap.

1.3 Research Objectives

The following 4 objectives have been identified to guide this study:

- Assess the level of AIS adoption among SMEs in Dhaka, Bangladesh.
- Examine the relationship between AIS effectiveness and fraud prevention in SMEs.
- Identify key AIS internal control features that reduce fraud risk within SMEs.
- Identify the major barriers to effective AIS adoption among SMEs in Bangladesh

1.4 Research Hypotheses

Based on the theoretical framework and prior literature, the following three hypotheses are formulated for empirical testing:

H1: The strongest and most negative relationship exists between the AIS adoption and the incidence of fraud in the SMEs.

H2: AISs incorporating robust internal controls are essential for mitigating fraud risk in SMEs.

H3: Barriers to AIS adoption—financial, technical, and infrastructural—negatively affect the effectiveness of fraud prevention in SMEs.

1.5 Significance of the Study

This research makes several contributions. It provides SME owners and managers with empirical evidence on which AIS features most effectively prevent fraud, enabling more specific investment decisions. The literature reviewed indicates that the successful implementation of AIS enhances the quality of internal control mechanisms and improves fraud-prevention outcomes in SMEs (Wulandari et al., 2024). For policymakers and other regulators, such as the SME Foundation and Bangladesh Bank, the findings can inform the design of support programmes to encourage the use of AIS. There is also evidence that AIS performance has a significant positive impact on organizational performance and the quality of control in SMEs (Al-Okaily et al., 2020). For accounting practitioners and technology providers, the study identifies the most critical implementation barriers to address, thereby helping develop affordable, easy-to-access AIS solutions tailored to the SME environment. Research also shows that the quality of AIS and its appropriate implementation enhance the reliability of accounting information and efficiency of decision-making in the SMEs (Alharasis, 2025).

1.6 Scope and Limitations

This paper has a limited geographical scope, focusing on manufacturing and service sector firms based in Dhaka, Bangladesh. The study has a small sample of 50 respondents, which limits statistical power and the ability to generalize the results to the larger SME population. Other studies on similar SME-oriented AIS have also relied on relatively small samples due to data accessibility and sensitivity concerns.

Being a cross-sectional study, it is not possible to determine causality. According to the literature, cross-sectional AIS studies mostly identify associations rather than causal effects over the long term. Also, self-reporting bias can affect response accuracy, especially regarding fraud incidence, because SME managers may be hesitant to provide complete information.

Moreover, differences in AIS levels, human resource capabilities, and company size within the SME category might affect fraud-prevention outcomes, thereby undermining the consistency of results across firms. These shortcomings are recognized and managed through proper methodological precautions.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter is a review of the theoretical and empirical literature on Accounting Information Systems (AIS) and fraud prevention, with a focus on Small and Medium Enterprises (SMEs). It integrates key theories, conceptual frameworks, and prior empirical findings to articulate how AIS can lead to effective internal control, financial transparency, and information quality, and to manage fraud risk in organizations. Previous studies support the idea that the successful implementation of AIS can reinforce internal control systems and improve fraud-prevention tools within SMEs . Furthermore, it has been positively associated with enhanced organizational performance and improved control efficiency.

The chapter also contextualizes the SME sector by examining its structural attributes, operational challenges, and technological adoption issues, all of which are relevant to AIS implementation outcomes. The advantages of computerized AIS in preventing and detecting fraud are widely acknowledged by international researchers, empirical studies addressing this phenomenon in SMEs within developing economies are limited. This literature gap forms the basis and justification for the present research and informs the formulation of research hypotheses.

2.2 Theoretical Framework

2.2.1 Fraud Triangle Theory

The Fraud Triangle Theory, a theory of financial fraud advanced by Cressey (1953) and later popularised in books on fraud examination, holds that financial fraud results when three factors are concurrently met: pressure (or incentive), opportunity, and rationalisation. Among these three components, the opportunity is the closest to organisational intervention, through the use of accounting controls and information systems. Empirical studies show that internal control systems can be strengthened, thereby mitigating the risk of fraud within SMEs (Hossain, 2025). Moreover, it has been demonstrated that successful Accounting Information Systems (AIS) can improve the control environment and minimise the possibilities of fraudulent activities by monitoring and automated processes (Wulandari et al., 2024).

The effective implementation of AIS restricts unauthorized access, improves transaction verification, and establishes reliable audit trails that enhance transparency and accountability (Saeed & Hama, 2023). The design of the research questionnaire is informed by this theoretical perspective, particularly with respect to questions evaluating internal control effectiveness and AIS features, given that internal control integration within AIS is consistently associated with fraud-prevention outcomes in SMEs (Teru et al., 2017).

2.2.2 COSO Internal Control Framework

The Internal Control - Integrated Framework provided by the Committee of Sponsoring Organisations of the Treadway Commission (COSO, 2013) identifies five components of good internal control: control environment, risk assessment, control activities, information and communication, and monitoring activities. The paradigm has become popular in academic research and practice as the ultimate benchmark for assessing the quality of internal controls. These internal control elements are evidence-based, and their strength is among the most critical factors determining the effectiveness of fraud prevention in SMEs (Hossain, 2025).

AIS are used as technological support in applying a number of COSO elements, especially control activities (via automated authorisation and segregation of duties), information and communication (via real-time reporting), and monitoring (via automated alerts and exception reporting). Previous research shows that AIS integration improves the efficiency of internal controls and promotes systematic monitoring mechanisms in SME settings (Teru et al., 2017). Also, it has been positively associated with AIS effectiveness, better organizational control structures, and information reliability (Al-Okaily et al., 2020).

The COSO framework thus provides a structural framework for operationalising AIS effectiveness in the context of this study, as the technological control characteristics of AIS directly influence reducing fraud risks and enhancing internal governance processes (Wulandari et al., 2024).

2.2.3 Technology Acceptance Model

To understand the factors determining user acceptance and adoption of information systems, Davis (1989) developed the Technology Acceptance Model (TAM). TAM recognizes two main constructs: perceived usefulness, the degree to which a user believes a system will improve performance, and perceived ease of use, the degree to which a user believes a system will be effort-free. Empirical studies in SME settings have established that perceived usefulness and ease of use play a major role in determining effective use and adoption of Accounting Information Systems (Ismail, 2009).

These constructs are valid in the SME setting since owner-managers tend not to make decisions to adopt technology based on official cost-benefit assessments but on their subjective judgement of the benefits of a system, its operational efficiency, and usability. Research also shows that decision quality and operational performance are enhanced during AIS implementation when users believe the system is useful and easy to manage (Harianto et al., 2025).

TAM thus provides a good theoretical framework for explaining the barriers to AIS adoption identified in objective four of this study, especially those associated with user resistance, technical complexity, and low technological competence among SMEs (Noviyanti, 2025).

2.3 AIS and Fraud Prevention

Increasing empirical evidence indicates that high-performance implementation of AIS is associated with lower fraud levels. Empirical data indicate that high-quality Accounting Information Systems significantly strengthen internal control procedures, thereby reducing the likelihood of financial misstatement and irregularities (Wulandari et al., 2024). Similarly, research on computerized AIS environments indicates that companies with computerized systems have enhanced fraud detection capabilities compared to those using manual accounting systems (Saeed and Hama, 2023). The distinction is largely due to inherent control mechanisms, including audit trails, access controls, system-generated documentation, and automated reconciliation processes, which promote transparency and accountability in SMEs (Teru et al., 2017).

Specifically, real-time monitoring has also been cited as an important factor in the effectiveness of AIS. It has been found that the extent to which AIS is effective in the organizational context depends on whether the system delivers timely, accurate, and relevant financial information that can be controlled and monitored (Al-Okaily et al., 2020). Weak fraud-prevention systems and poor anomaly detection, combined with advanced AIS, automated validation, and structured reporting, hinder SMEs (Alharasis, 2025). These results indicate that not all implementations of AIS are equally successful - the elements of control and monitoring implemented are the focal point in the achievement of the results of fraud prevention in the SME environment.

2.4 AIS Adoption Challenges in SMEs

Although AIS adoption has been reported to have positive impacts, its adoption rate among SMEs in developing economies has been very low. Empirical evidence indicates that financial constraints, a lack of accounting skills, and insufficient technological infrastructure constitute significant obstacles to the adoption of AISs in SME settings (Ismail, 2009). Structural and resource constraints of this nature are common in developing economies, as SMEs in such countries are often reliant on manual or semi-computerized accounting tools, which are not due to insufficient financing but to a lack of capabilities (Tazilah and Hussain, 2015).

The Technology Acceptance Model (TAM) framework also further demonstrates why manual systems are still used despite the availability of digital substitutes. It has been found that user knowledge, perceived usefulness, and technological competence play a major role in determining AIS adoption among SMEs (Noviyanti, 2025). These results indicate that managerial digital literacy and human resource competence might play a stronger role in AIS implementation than financial considerations per se, and that training and capacity-building initiatives might prove more useful than financial subsidies in facilitating it.

2.5 Internal Controls and Fraud Risk

The internal control literature has consistently shown that particular control mechanisms, especially segregation of duties, authorization controls, and periodic reconciliation, are among the best available fraud deterrents for any-sized organization. Empirical evidence shows that effective internal control systems significantly reduce the

likelihood of fraud and financial anomalies in SMEs (Hossain, 2025). Furthermore, integrating AIS and internal control processes increases monitoring efficiency and reduces the risk of asset misappropriation (Wulandari et al., 2024). Segregation of duties remains particularly effective, as it curtails the concentration of transactional power in a single individual and thereby diminishes the opportunity aspect of the fraud risk.

But in SMEs, the full segregation of duties is a structurally complex concept when faced with a small accounting team and constrained human resources. According to research, weaknesses in controls in SMEs are often attributed to a lack of personnel and the inability to separate roles (Tazilah & Hussain, 2015). In this case, AIS would partially offset structural constraints by integrating automated authorization layers, access controls, and exception reporting generated by the system into the transaction processing workflows (Teru et al., 2017). This is a technological replacement for manual segregation systems, which is of great significance to the Bangladesh SME setting in which the current study is carried out.

2.6 Research Gap and Hypothesis Development

The literature review shows that the relationship between AIS and fraud prevention is well documented, but there is practically no empirical evidence of this relationship based on primary survey data from Bangladesh SMEs. Even though investigations in developing economies show that AIS efficacy enhances the quality of internal controls and organizational performance.

The available literature also shows that computerized AIS enhances fraud detection and monitoring abilities ; nevertheless, the studies are mostly focused on non-SMEs or other regulatory and economic frameworks. Moreover, investigations in SME environments usually focus on single variables, such as AIS quality or organizational performance, and do not incorporate fraud-prevention outcomes into a single analytical platform.

Moreover, little has focused on simultaneously analyzing levels of AIS adoption, internal control efficacy, fraud occurrence, and adoption obstacles within a single empirical model for Bangladesh SMEs. The relationship between technological capability, human resource competence, and control mechanisms has not been well researched in this particular context. Thus, this research paper will directly address these gaps by developing a comprehensive model that links AIS adoption to fraud-prevention outcomes in the context of SMEs in Bangladesh.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Philosophy and Approach

The paper adopts a positivist philosophical standpoint, which presupposes that social reality is objective and quantifiable and that knowledge is best obtained through empirical observation and hypothesis testing. The deductive methodology is used, according to which hypotheses derived from the theory are verified using empirical data obtained with structured measurement tools. The importance of quantitative AIS research is that it uses deductive reasoning to test the relationship between the effectiveness of the system, internal controls, and organizational outcomes (Ismail, 2009).

This combination of positivism and deductive reasoning is particularly appropriate for the quantitative research approach chosen in the study, as it aims to measure the association between AIS adoption and fraud-prevention outcomes and to test the statistical significance of the identified patterns. The same empirical research studies that have investigated AIS efficacy and fraud prevention in SMEs have also used structured survey tools and hypothesis testing to establish statistical relationships (Wulandari et al., 2024).

3.2 Research Design

A cross-sectional quantitative survey design is adopted. This design enables the simultaneous collection of data from multiple respondents at any given time; therefore, it allows measurement of relationships between key variables within a given sample. The survey techniques most commonly used in AIS research are cross-sectional surveys, which are used to analyse the effectiveness of systems, the quality of internal controls, and organizational performance in an SME environment (Ismail, 2009).

This design is especially appropriate for studies that examine the relationship between AIS implementation and performance or control variables in settings of developing economies (Al-Okaily et al., 2020). They are suited to both exploratory and descriptive studies in which the main goal is to identify trends and statistically significant relationships, rather than to assess long-term causal impacts. This study is therefore well within the resource and time limitations.

3.3 Population and Sampling

The study will include SME owner-managers, accountants, and finance officers from registered SMEs in Dhaka, Bangladesh. These people were chosen as suitable key informants because they have first-hand knowledge of the accounting practices, internal control mechanisms, and fraud prevention mechanisms of their firms. Earlier studies on AIS in SMEs also find that owner-managers and accounting staff are the most dependable participants because of their involvement in financial decision-making and system implementation (Ismail, 2009). The purposive sampling strategy was used to ensure that only those directly involved in accounting or financial management functions were selected, as random sampling of the general SME employee population would yield a high proportion of uninformed respondents.

A target of 50 respondents was reached. Although the sample size is smaller than that of large-scale survey research, it is consistent with the practice in exploratory quantitative AIS studies conducted in an SME setting in developing economies (Al-Okaily et al., 2020). This type of research often operates under constraints on access and disclosure that limit the scope of the sampling frame. The sampling frame was selected based on the registered firm directory of the SME Foundation and the list of the Dhaka Chamber of Commerce and Industry. Questionnaires were distributed via Google Forms, WhatsApp, and email, with supplementary distribution at the SME business centres in both Mirpur and Motijheel, Dhaka. Data was gathered during January and February of 2026.

3.4 Questionnaire Design and Measures

A questionnaire containing 33 items was created using structured questionnaires that have been tested for scale validity in previous studies on AIS and fraud prevention. In the SME context, structured measurement tools are commonly used in survey-based AIS research to assess system adoption, internal control strength, and organizational outcomes (Wulandari et al., 2024). The instrument is divided into six parts.

Section A entails demographic and firm profile information through categorical questions. Section B-E are five-point Likert scales (1 = Strongly Disagree,2 =Disagree, 3=Neutral, 4= Agree, 5 = Strongly Agree), which are used to quantify AIS adoption (7 items), internal control effectiveness (7 items), fraud experience (6 items), perceived barriers to AIS adoption (5 items), and overall AIS effectiveness (5 items). Likert-scale

measurement has been widely used in research on AIS effectiveness and adoption to measure perceptual and behavioral constructs in SME settings (Ismail, 2009).

The questionnaire design is based on the dimensions of AIS quality, control integration, and fraud detection ability, which are recognized as established in previous empirical literature (Al-Okably et al., 2020). Pilot testing of the instrument involved five SME accountants, and only minor wording changes were made to simplify it and ensure it was relevant to the Bangladesh SME context.

3.5 Data Analysis Techniques

Microsoft Excel 2021 was used to analyse data. The sequential methods used were as follows. To describe the sample and summarise construct scores, descriptive statistics were calculated, including frequencies, means, and standard deviations. AIS survey research is common in descriptive analysis, which introduces the characteristics and distributions of respondents and variables before conducting inferential testing (Ismail, 2009).

Second, alpha coefficients were calculated for all multi-item Likert scales to assess internal reliability. Cronbach's alpha is a reliability test that assesses the consistency of items in a survey, a standard practice in AIS and internal control research (Wulandari et al., 2024).

Thirdly, Pearson's correlation was used to test the bivariate relationships among AIS adoption, internal control effectiveness, barriers to adoption, and fraud incidence. SME-based AIS research studies usually employ correlation analysis to emphasize the degree and direction of associations among system effectiveness and organizational control variables (Al-Okaily et al., 2020).

Fourth, a multiple regression model was conducted to determine the relative predictive value of each independent variable for fraud prevention effectiveness, thereby testing the H1, H2, and H3 hypotheses. Regression modelling has been widely used in previous AIS empirical studies to assess the explanatory power of system quality and system control mechanisms for organizational outcomes (Alharasis, 2025).

3.6 Ethical Considerations

Each respondent was informed of the study's aim and that they were free to participate. No personal information was collected, and anonymity was ensured. Survey-based AIS research ethics focuses on voluntary sampling, research confidentiality, and openness in informing the subjects about the research (Ismail, 2009).

Questions about the experience of fraud were rather sensitive and phrased indirectly to reduce social desirability bias and encourage honesty. The literature on SMEs and fraud highlights the futility of designing questionnaires carelessly to minimize bias in responses and underreporting of aberrations (Hossain, 2025).

The research was conducted in accordance with the ethical guidelines of the relevant academic institution. As no vulnerable groups were involved in the study and no sensitive personal information was used, formal ethical committee support beyond the institutional guidelines was not necessary.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Response Rate and Sample Profile

Of the 60 questionnaires sent, 50 were completed and returned, yielding a response rate of 83.3%. This rather good response rate increases the credibility of the results and decreases the chances of non-response bias. It indicates a high degree of participants' involvement in SMEs and suggests the applicability of the research subject to their reality. The 83.3% response rate is a good response rate for a survey-based study, especially in the SME setting, where time constraints and sensitivity to financial issues often reduce response rates.

The demographic profile of the sample is represented in Table 4.1.

Table 4.1: Sample Profile (n = 50)

Table 1 :

Characteristic	Category	n (%)
Business Type	Manufacturing	22 (44.0%)
	Service	28 (56.0%)
Firm Size	Small (10–50 employees)	31 (62.0%)
	Medium (51–250 employees)	19 (38.0%)
Respondent Role	Owner-Manager	17 (34.0%)
	Accountant	25 (50.0%)
	Finance Officer	8 (16.0%)
Firm Age	2–5 years	12 (24.0%)
	6–10 years	21 (42.0%)
	More than 10 years	17 (34.0%)
Current Accounting System	Fully Manual	18 (36.0%)
	Partial AIS (basic software)	21 (42.0%)
	Full AIS/ERP	11 (22.0%)

Source: Primary survey data (2026)

The sample is broadly representative of the SME community in Dhaka, with a small majority of service businesses and the rest engaged in manufacturing and trading. Such a sectoral blend indicates that urban SMEs are typically dominated by service-based firms rather than production-based ones. The proportion of accountants in the respondent group is the highest (50%), as expected, given that these are the direct participants in the reporting of financial results, processing transactions, and implementing internal controls. Their involvement increases the credibility and technical reliability of the answers, especially in areas that assess the functionality of AIS and fraud prevention measures.

Interestingly, only 22 percent of the firms that respond to the questions use a fully integrated AIS or ERP system; 36 percent use manual accounting methods; and the remaining firms use basic accounting software or a spreadsheet-based accounting system. This distribution represents a significant potential for AIS growth in the industry and implies that different degrees of technological maturity of SMEs are possible. The high manual dependency could also suggest greater human-error impact, longer reporting latency, and weaker audit trails. On the other hand, companies operating on integrated systems tend to enjoy embedded controls, real-time reporting functions, and organized financial records. Altogether, the findings show that the digital gap in the SME sector is substantial, and technological modernization and control improvements can be significantly enhanced.

4.2 Reliability Analysis

All Likert scales with more than one item were previously computed using Cronbach's alpha before further analysis. Table 4.2 shows satisfactory internal consistency for all constructs. All the alpha coefficients were greater than the generally accepted threshold of 0.70, indicating acceptable to strong reliability of the measurement scales. This implies that the items in every construct are internally consistent and they measure the same underlying concept. The reliability results will provide confidence that the questionnaire is a sound instrument that can be further correlated with and regressed on other variables.

Table 4.2: Cronbach's Alpha Reliability Coefficients
Table 2

Construct	No. of Items	Cronbach's α
AIS Adoption Level	7	0.83
Internal Control Effectiveness	7	0.81
Fraud Incidence	6	0.78
Barriers to AIS Adoption	5	0.76
Overall AIS Effectiveness	5	0.80

Note: Cronbach's α > 0.70 indicates acceptable reliability (Nunnally, 1978). Source: Primary survey data (2026)

The Cronbach alpha is greater than the accepted standard of 0.70 (Nunnally, 1978), indicating that each scale has sufficient internal consistency and can be used in further statistical analysis. This shows that the items in each construct are adequately correlated and that they measure the underlying variables they intend to measure. High reliability coefficients minimize measurement error and increase the validity of future inferential tests, such as correlation and regression analyses. The scales are therefore considered statistically sound for testing hypotheses and modelling in this study.

4.3 Descriptive Statistics

Table 4.3 presents the means and standard deviations for the Likert-scale constructs of interest measured in the study. The scores will be provided out of 1 (Strongly Disagree / Never) to 5 (Strongly Agree / Very Frequently). The average values provide a general picture of respondents' perceptions for each construct, whereas the standard deviations indicate the extent of variation in responses. High mean scores indicate agreement or increased frequency, and the reverse holds true. The values of dispersion also aid in determining the level of consistency among respondents, and the smaller the standard deviation, the more homogeneous their perceptions.

Table 4.3: Descriptive Statistics for Key Constructs (n = 50)
Table 3

Construct / Item	Min	Mean	SD
AIS Adoption Level (composite)	1	2.74	0.91
Our firm uses a fully integrated accounting system	1	2.46	1.12
Our AIS includes automated audit trail functionality	1	2.58	1.08
Real-time transaction monitoring is active in our AIS	1	2.30	1.14
Internal Control Effectiveness (composite)	1	2.96	0.87
Duties are clearly segregated among accounting staff	1	2.82	1.05
All payments require dual authorisation before processing	1	3.10	0.98
Reconciliations are performed at least monthly	1	3.16	0.94
Fraud Incidence (composite)	1	3.12	0.94
Our firm has experienced unauthorised financial transactions	1	3.04	1.07
Expense reimbursement fraud has occurred in our firm	1	2.94	1.09
Barriers to AIS Adoption (composite)	1	3.58	0.82
Implementation cost is a significant barrier for our firm	2	3.76	0.91
Lack of trained IT/accounting staff limits AIS adoption	2	3.82	0.87
Poor internet infrastructure restricts our use of AIS	1	3.44	0.99

Note: Scores on a 5-point Likert scale (1 = Strongly Disagree/Never, 5 = Strongly Agree/Very Frequently). Source: Primary survey data (2026)

The descriptive findings indicate significant trends. The average AIS adoption score of 2.74 indicates that the respondent firms exhibit a below-moderate level of AIS adoption. This is in line with previous frequency results, which show that 36 percent used fully manual systems and only 22 percent used integrated AIS solutions. The low adoption rate indicates limited technological integration in financial management processes, which could limit automation, real-time reporting, and systematic enforcement of controls.

The average internal control effectiveness score of 2.96 also indicates that the sample has moderate-to-weak internal control structures. This indicates that many companies might not have an institutionalised method for segregation of duties, regularised reconciliation, or mechanised authorization controls. This closeness to the neutral midpoint (3.00) suggests that some firms are inconsistent in the strength of their control; some may have comparatively tight systems in place, whilst others may be informally run.

The fraud incidence rate is 3.12, with an average of 3.12, indicating that a moderate percentage of firms identified cases of any form of fraud. This value is marginally higher than the neutral midpoint, suggesting that fraud exposure is not rare in the sample. The relatively low AIS adoption and moderate levels of fraud incidence can also demonstrate the possibility of the connection between technological constraints and susceptibility to irregularities.

The highest mean score (3.58) is obtained for the barriers construct, indicating that most respondents view these barriers as significant challenges to AIS adoption, driven by financial, human capital, and infrastructural constraints. Implementation cost (mean = 3.76) and skills shortage (mean = 3.82) are the most important individual barriers. These results emphasize the potential strength of the limitation of capability as an independent factor, more significant than financial constraints, which supports the role of technical training, the establishment of digital literacy, and capacity-building programs in facilitating AIS adoption in the SME sector.

4.4 Correlation Analysis

Pearson correlation coefficients were calculated to assess the bivariate association among the study's key constructs. Table 4.4 represents the results. The correlation matrix helps measure the strength and direction of the linear relationships among AIS adoption, internal control effectiveness, perceived barriers, and fraud incidence.

The range of the correlation coefficient (r) is between -1 and +1, with positive values indicating a direct relationship and negative values an inverse relationship. References that are near zero indicate weak relationships, whereas those that tend to approach the value of ±1 indicate strong associations. The level of statistical significance was also considered to determine whether the observed correlations could have arisen by chance.

The analysis presents preliminary evidence on the relationships among key variables before the multiple regression analysis is conducted, providing an initial indication of whether the proposed hypotheses will be supported at the bivariate level.

Table 4.4: Pearson Correlation Matrix (n = 50)

Table 4

Variable	1	2	3	4
1. AIS Adoption Level	1.00			
2. Internal Control Effectiveness	.68**	1.00		
3. Fraud Incidence	-.61**	-.73**	1.00	
4. Barriers to AIS Adoption	-.55**	-.48**	.52**	1.00

Note: ** $p < 0.01$ (two-tailed). Source: Primary survey data (2026)

The correlation results provide an initial indication of all three hypotheses. The level of AIS adoption shows a significant negative correlation with fraud frequency ($r = -0.61$, $p < 0.01$), providing preliminary support for H1. This implies that the greater the degree of AIS implementation, the less fraud is reported. The effectiveness of internal control shows a stronger negative relationship with exposure to fraud ($r = -0.73$, $p < 0.01$), providing strong support for H2 and indicating that effective control systems are important for minimising exposure to fraud. Construction of barriers to AIS adoption is positively correlated with fraud incidence ($r = 0.52$, $p < 0.01$), indicating that greater perceived barriers are associated with greater exposure to fraud, providing initial evidence for H3.

The AIS adoption and internal control effectiveness are significantly positively related ($r = 0.68$, $p < 0.01$), which is not surprising, as AIS adoption is one of the main ways internal control procedures in SMEs are formalised and computerised. The implication of this relationship is that the firms that have invested in AIS are also likely to experience a high degree of structured control practices.

The barriers to adoption exhibit strong negative associations with AIS adoption ($r = -0.55$, $p < 0.01$) and internal control effectiveness ($r = -0.48$, $p < 0.01$), indicating that barriers to adoption manifest as reduced technological integration and inefficient control settings. In general, the correlation table demonstrates a consistent pattern of

relationships consistent with the theoretical framework, providing a good basis for further multivariate regression analysis.

4.5 Multiple Regression Analysis

A multiple regression analysis was performed, with fraud incidence as the dependent variable and AIS adoption level, internal control effectiveness, and barriers to AIS adoption as independent variables. In this way, one can simultaneously analyze the specific role of each predictor and moderate the impact of the rest. Regression analysis can provide a stronger test of the hypotheses than simple bivariate correlations because it isolates the effect of each independent variable.

Tables 4.5 and 4.6 give the results. These tables present general model fit statistics, including R and R^2 values, standardized beta coefficients, t-values, and the significance levels of each independent variable. The summary of the model shows the percentage of the variance in fraud occurrence explained by AIS adoption, internal control effectiveness, and perceived barriers, and the coefficients table shows which predictors have a statistically significant effect when taken together.

Table 4.5: Regression Model Summary

Table 5

R	R^2	Adjusted R^2	F-statistic (p-value)
.81	.66	.63	30.14 (< .001)

Note: Dependent variable = Fraud Incidence. Source: Primary survey data (2026)

Table 4.6: Regression Coefficients

Table 6

Predictor Variable	β	Std. Error	t-value	p-value
(Constant)	5.12	0.48	10.67	< .001
AIS Adoption Level	-0.28	0.11	-2.55	.014
Internal Control Effectiveness	-0.42	0.10	-4.20	< .001
Barriers to AIS Adoption	0.19	0.09	2.11	.040

Note: Dependent variable = Fraud Incidence. β = unstandardised coefficient. Source: Primary survey data (2026)

It is a strong model of explanation, as the regression model is statistically significant ($F = 30.14$, $p \leq 0.001$) and explains 63% of the variation in fraud incidence (Adjusted $R^2 = 0.63$). The Adjusted R^2 of 0.63 indicates that almost two-thirds of the variation in fraud incidence across sampled SMEs can be jointly explained by AIS adoption, internal control effectiveness, and perceived adoption barriers. This provides considerable explanatory power for behavioural and organizational research being undertaken in the SME setting. The three predictor variables are all statistically significant at the $p < 0.05$ level, which supports the soundness of the proposed model.

The most significant single predictor of fraud is internal control effectiveness ($\beta = -0.42$, $p = 0.001$), which supports the assertion that stronger internal controls are associated with significantly lower fraud exposure.

The level of AIS adoption is also a major negative predictor ($\beta = -0.28$, $p = 0.014$), indicating that a firm with higher AIS adoption carries less fraud, regardless of its internal control levels. This implies that AIS can directly help prevent fraud by automating, monitoring, and implementing system controls, compared to manual methods.

The presence of barriers to AIS adoption has a positive effect on fraud levels ($\beta = 0.19$, $p = 0.040$), supporting the notion that companies with higher barriers to its adoption are more vulnerable to increased fraud risks. This observation supports the premise that structural and capability limitations not only slow the implementation of the technology.

4.6 Hypothesis Testing Summary

The results of the hypothesis tests are summarised in Table 4.7, along with the correlation and regression results. The results do suggest that the three hypotheses (H1, H2, and H3) are accepted. The correlation and regression tests reveal that internal control effectiveness and AIS adoption are significantly associated with a decrease in fraud incidence, and that barriers to AIS adoption are significantly associated with an increase in exposure to fraud. The regression results also indicate that internal control effectiveness is the most effective predictor of the independent variables. All in all, the findings of hypothesis testing are in line with the theoretical framework, which empirically supports the suggested research model.

Table 4.7: Hypothesis Testing Outcomes
Table 7

Hypothesis	r or β	p-value	Outcome
H1: AIS adoption negatively associated with fraud incidence	β = -0.28	.014	Supported
H2: Internal controls reduce fraud risk significantly	β = -0.42	< .001	Supported
H3: Barriers negatively affect fraud prevention outcomes	β = 0.19	.040	Supported

Source: Primary survey data (2026)

The data support all three hypotheses. All of these findings confirm the hypothesis that AIS adoption and internal control strength are important protective variables against financial fraud in Bangladesh SMEs, and obstacles to AIS adoption are an important risk-enhancing factor.

The overall results of the correlation and regression analyses have revealed a steadfast and conceptually consistent trend: the companies that invest in the structured AIS and have a more effective internal control system are less exposed to fraud, and the firms with more limitations on their expenditure, on their technical and human resources, are more vulnerable. In general, the empirical data support the key hypothesis of the current paper: technological capability and control efficacy play a decisive role in fraud-prevention outcomes in the SME sector.

4.7 Summary of Key Findings

The analysis provides five major findings. To begin with, most of the sampled SMEs (78% with full AIS integration) have yet to adopt fully integrated accounting systems, and 36% use fully manual accounting systems. This indicates that the industry's financial management is relatively low in technological integration, suggesting a significant opportunity for digital transformation.

Second, the incidence of fraud is high, with a composite mean score of 3.12, suggesting that a large percentage of firms have experienced some form of financial fraud. That indicates that financial irregularities are a more real operational risk faced by several SMEs than a solitary event.

Third, the skills shortage and implementation cost are estimated as the worst impediments to AIS adoption, with the mean scores of 3.82 and 3.76, respectively. This observation suggests that human capital constraints are as important as financial constraints in determining technology adoption decisions in SMEs.

Fourth, the effectiveness of internal controls is the most significant predictor of fraud-prevention outcomes and accounts for most of the protective power of AIS. This means that although the adoption of AIS is significant, the fraud-minimising effects are mainly achieved through robustness and the appropriate deployment of internal control mechanisms embedded within the AIS.

Fifth, the entire regression model explains 63 percent of the overall variance in the incidence of fraud, validating the fact that the adoption of AIS, internal controls, and adoption barriers is a powerful explanatory tool for understanding the exposure to fraud within SMEs in Bangladesh. Such a high explanatory potential highlights the pragmatic and theoretical importance of the suggested model.

CHAPTER FIVE: DISCUSSION

5.1 Discussion of Findings

This observation that AIS adoption has a significant, negative relationship with fraud incidence (β = -0.28, p = 0.014) is consistent with the broader empirical evidence. Equivalent findings demonstrate that computerized AIS settings enhance fraud detection and reduce the risk of asset misappropriation through integrated surveillance and system controls (Saeed & Hama, 2023). Theoretically, this finding is consistent with the Fraud Triangle Theory, specifically the opportunity component: AIS minimises the opportunity to commit fraud by implementing access controls, creating audit trails, and automating transaction authorisation, thereby reducing the likelihood that any individual will commit fraud and hide it. The empirical studies also support the notion that the quality of AIS enhances internal control mechanisms that reduce the risk of fraud (Wulandari et al., 2024).

Of particular interest is the finding that internal control effectiveness is the best predictor of fraud occurrence (β = -0.42, p < 0.001). This finding is consistent with the fact that strong internal control mechanisms would significantly curb financial anomalies in SMEs (Hossain, 2025). It complements previous studies, which show that AIS helps prevent fraud, but the process is facilitated by enhanced internal control operations and monitoring systems rather than relying on the system itself (Teru et al., 2017). The fact that the stronger regression coefficient for internal controls than for AIS adoption per se indicates that it is not merely the presence of AIS that mitigates fraud, but the quality, enforcement, and operationalisation of the embedded control features.

The fact that the mean barrier score is high (3.58) and the barrier regression coefficient is significant (β = 0.19, p = 0.040) suggests that barriers are directly associated with increased exposure to fraudulent activities. This observation aligns with existing SME-oriented AIS studies, which identify skills gaps and financial constraints as the main obstacles to the successful implementation of systems (Ismail, 2009). Also, emerging ideas on AIS implementation highlight that perceived complexity and a lack of technological competence remain challenges for its implementation in small companies (Noviyanti, 2025). In those cases where owner-managers view AIS as too complicated or too expensive, they do not adopt it, even when its advantages have been reported,

and the company must continue to use manual controls, which are more prone to manipulation and error.

The relative lack of technological integration observed in most SMEs in developing economies is evidenced by the fact that only 22% of the respondent firms use a fully integrated AIS.

5.2 Practical Implications

For SME owners and managers, the findings suggest that any investment in AIS, even at a lower level, can yield quantifiable benefits by reducing the risk of fraud. Activating core control characteristics, especially segregation of duties, authorisation workflow, and audit trail functionality, should have priority as these attributes were determined to be the most powerful protecting qualities in the regression model. Managers ought to view AIS as a strategic internal control infrastructure rather than a record-keeping tool. Companies that already operate under manual systems can also follow a step-by-step approach, starting with a simple, inexpensive cloud-based accounting solution and adding features such as automated reconciliation and exception reporting.

For policymakers and other organizations, such as the SME Foundation and Bangladesh Bank, the findings illustrate the need for targeted interventions to address the two most critical obstacles to adoption: skills shortages and the cost of implementation. Policy measures may comprise subsidised AIS implementation programmes, tax incentives on the adoption of digital technology, low-interest finance schemes to fund the purchase of digital technology, and designed digital literacy training for the owner-managers of SMEs and accounting staff. Short courses in digital accounting systems, which are capacity-building workshops and certification-based, may have a profound, beneficial impact on the industry's technological competence.

For accounting practitioners and AIS providers, the findings imply a need for simplified, inexpensive, and locally contextualised AIS solutions. They should have dashboards that are easy to use, automated compliance templates aligned with Bangladesh's tax regulations, and modular pricing models that enable SMEs to expand system functionality as their business grows. Since the most commonly mentioned barrier is a skills shortage, vendors ought to supplement software delivery by offering formal onboarding and ongoing user assistance, along with effective training programmes.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This paper aimed to analyze how Accounting Information Systems can help avert financial fraud in SMEs in Dhaka, Bangladesh, through primary quantitative survey data of 50 participants. The collected evidence provides clear, statistically sound support for the hypothesis that, in the context of financial fraud prevention in SME settings, AIS adoption and internal control effectiveness serve as protective factors, and that barriers to adoption increase the risk of fraud. The results show that technological capability and control quality are not administrative improvements; rather, they are the key determinants of fraud resilience in the small business context.

The three hypotheses were all confirmed. The adoption of AIS at higher levels is strongly linked to reduced fraud incidence (H1 supported; $\beta = -0.28$, $p = 0.014$). Better internal controls integrated in AIS are an even better prophecy of lower risk of fraud (H2 supported; $\beta = -0.42$, $p < 0.001$). Direct effects of adoption obstacles adversely affect the findings on fraud prevention (H3 supported; $\beta = 0.19$, $p = 0.040$). The combination of these predictors explains 63 percent of the variance in fraud incidence, providing a strong explanatory model with significant predictive power for SME fraud exposure.

The research offers a unique empirical contribution by drawing on primary data from SMEs in Bangladesh, an underrepresented area in the existing literature on AIS and fraud prevention. The study is the first attempt to define the effectiveness of internal controls and structural barriers, including technological adoption, within a single analytical model, which would be significant for deepening academic investigation and policy interventions to enhance financial governance in the SME sector.

6.2 Recommendations

The findings suggest the following as recommendations:

- SME owners are advised to enhance the initiation of the core AIS control features, such as segregation of duties, dual authorisation, and automated audit trails, even in simple accounting software, since they are the control mechanisms that have the strongest association with fraud prevention. Instead of focusing on software purchases, attention should be given to the implementation and regular

utilisation of embedded control capabilities to achieve the greatest protective advantages.

- To address the cost barrier as the second biggest constraint to the adoption of technologies by SMEs, the SME Foundation and Bangladesh Bank should come up with subsidised AIS implementation programmes and provide financial incentives to SMEs to adopt technologies, which is the second most significant constraint in this study. Adoption could be further accelerated by low-interest technology financing programs and tax credits for investments in digital systems.
- Government and industry agencies need to invest in AIS and digital accounting literacy training of SME owner-managers and accountants, in particular, as skills shortage is the most identified barrier (mean = 3.82). Short courses, certification programmes, and practical workshops on system-based internal controls would go a long way toward improving preparedness for adoption.
- AIS vendors must come up with simplified, low-cost, and locally modified accounting software that has user-friendly interfaces and powerful post-implementation support services. They would be made more resource-constrained SMEs with adoptable modular pricing structures and scalable system designs.
- The regulatory authorities should look at putting a minimum standard of internal control requirements on registered SMEs to be eligible to receive government contracts, participate in public procurement, or receive formal credit. Establishing a connection between compliance and actual institutional rewards would provide stronger motivation for SMEs to enhance internal control mechanisms and embrace AIS solutions.

6.3 Limitations and Future Research

This research has several limitations. The small sample of 50 respondents, although adequate for an exploratory quantitative study, limits the generalizability of the results to the overall SME population in Bangladesh. External validity would be improved with a larger sample, and more subgroup analyses could be conducted across sectors and firm sizes.

The cross-sectional design does not allow for establishing any definite causal associations among AIS adoption, internal control effectiveness, and fraud. Although statistically significant links were found, longitudinal studies would be needed to establish whether the gains from implementing AIS directly translate into a long-term reduction in fraud.

The use of self-reporting bias (especially regarding the experience of fraud) would have likely led to under-reporting, either due to reputational concerns or because the data were confidential and not willing to be shared. Perceptual scales of internal control efficacy and AIS efficacy can serve as another indicator of respondents' interpretations of the system rather than its actual functionality.

Future studies are thus advised to use larger probability-based samples and longitudinal designs to help trace the long-term effects of adopting AIS. Curacy would be enhanced by including objective fraud indicators, such as audit results, forensic audits, or regulatory compliance documentation. Further comparative analyses of cities in Bangladesh, rural and urban clusters of SMEs, and various sectors of the industry would contribute more to the discussion of contextual differences in the relationship between AIS and fraud prevention and would inform future policy outcomes.

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APPENDIX: SURVEY QUESTIONNAIRE

Role of Accounting Information Systems in Fraud Prevention: Evidence from SMEs in Bangladesh

This questionnaire is part of an academic research study. All responses are strictly anonymous and will be used for research purposes only. Please answer all questions honestly. There are no right or wrong answers.

Section A: Organizational Profile

A1. Type of business:

□ Manufacturing	□ Service

A2. Firm size:

□ Small (10–50 employees)	□ Medium (51–250 employees)

A3. Your role :

□ Owner-Manager	□ Accountant	□ Finance Officer	□ Other

A4. Firm age:

□ 2–5 years	□ 6–10 years	□ More than 10 years

A5. Current accounting system:

□ Fully Manual	□ Partial AIS (basic software)	□ Full AIS/ERP

Section B: AIS Adoption Level

Please rate the following statements (1 = Strongly Disagree,2 = Disagree. 3 = Neutral . 4 = Agree 5 = Strongly Agree):

B1. Our firm uses a fully integrated accounting software system.	1	2	3	4	5
B2. Our AIS includes automated audit trail functionality.	1	2	3	4	5
B3. Real-time transaction monitoring is active in our system.	1	2	3	4	5
B4. Our system generates automated financial reports.	1	2	3	4	5
B5. Role-based access controls restrict system access appropriately.	1	2	3	4	5
B6. Our AIS integrates with other business management systems.	1	2	3	4	5
B7. Data analytics tools are available within our AIS.	1	2	3	4	5

Section C: Internal Control Effectiveness

C1. Accounting duties are clearly segregated among different staff.	1	2	3	4	5
C2. All payments require dual authorisation before processing.	1	2	3	4	5
C3. Bank reconciliations are performed at least monthly.	1	2	3	4	5
C4. Management reviews financial reports regularly for anomalies.	1	2	3	4	5
C5. Physical access to accounting records is appropriately restricted.	1	2	3	4	5
C6. Surprise audits or spot checks are conducted periodically.	1	2	3	4	5
C7. Exception reports are generated automatically for unusual items.	1	2	3	4	5

Section D: Fraud Experience

D1. Our firm has experienced unauthorised financial transactions.	1	2	3	4	5
D2. Expense reimbursement fraud has occurred in our firm.	1	2	3	4	5
D3. Asset misappropriation has been a concern in our firm.	1	2	3	4	5
D4. Financial records have been altered without authorisation.	1	2	3	4	5
D5. Vendor or procurement fraud has been experienced.	1	2	3	4	5
D6. Fraud, when detected, has caused significant financial loss.	1	2	3	4	5

Section E: Barriers to AIS Adoption

E1. Implementation cost is a significant barrier for our firm.	1	2	3	4	5
E2. Lack of trained IT/accounting staff limits AIS adoption.	1	2	3	4	5
E3. Poor internet infrastructure restricts our use of cloud AIS.	1	2	3	4	5
E4. Owner/manager resistance to change impedes system adoption.	1	2	3	4	5
E5. Concerns about data security deter our use of digital AIS.	1	2	3	4	5