

Challenges and Barriers to AI Adoption in Accounting in Bangladesh

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Abstract

The use of artificial intelligence (AI) is increasingly gaining momentum in the accounting field, but there are challenges in its adoption by accounting professionals in emerging countries, like Bangladesh. This study empirically explores six barriers to the adoption of AI in accounting practice in Bangladesh: AI Skill Gap, Data Privacy and Security issues, High Implementation cost, System Integration issues, Resistance to change, and Lack of technical knowledge, and checks the relationship between these barriers and the effective use of AI in accounting practice. Structured five point likert scale type questionnaire was used to conduct the survey in which accounting and financial professionals have been targeted as the respondents from the accounting firms, audit firms and corporate finance/accounting department in the city of Dhaka, Bangladesh through quantitative, cross sectional survey. The 156 responses received were analyzed by descriptive statistics, cronbach's alpha reliability analysis and pearson correlation and multiple regression in SPSS & MS Excel. There were acceptable to excellent internal consistencies for each construct (α -values ranged from .899 to .940). The results showed that there were six constructs in the barriers model that positively and significantly affect the use of effective AI; with the implementation costs, resistance to change, and lack of technical knowledge being the strongest unique predictors ($R^2 = .699$; $F(6, 149) = 57.54$; $p < .001$). Exposure to and familiarity with AI is discussed below and the results suggest a correlation between feeling there are more barriers and feeling engaged with and value the use of AI. The scope and limitations of this study and future study is discussed and implications for accounting firms, teachers and policy makers in Bangladesh is discussed. In this regard, Artificial Intelligence can be seen as a game-changer technology that is shaping the future of the business. In the realm of business accounting, AI is being referred to as a game-changer and is transforming the future of accounting.

Keywords: Artificial Intelligence, AI Adoption, AI in Accounting

1. Introduction

1.1 Background of the Study

From transactional, manual to automated reporting, anomaly detection and decision support, Artificial Intelligence (AI) has revolutionized the accounting field. (Tandiono, 2023) highlighted all the positive aspects of AI in reporting, detecting unethical and helping make intelligent decisions in the future of a company. Similarly, (Odonkor, Kaggwa, Uwaoma, Hassan, & Farayola, 2024) said that AI can also be used to assist in the financial

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reporting process to make it more effective and accurate, detect fraudulent financial reporting and predict future events. These are not just a phenomenon that can be seen in the more advanced economies. Even accounting profession is starting to invest in modern accounting system and there is a demand for disclosure of financial information of big listed companies like Square Pharmaceuticals PLC etc. in Bangladesh to move towards enterprise and cloud based accounting system.

Nevertheless, the adoption of AI is still challenging for many accounting firms or finance department in Bangladesh, especially small and medium sized firms, because of their resource limitations. These most constraining factors and challenges for Accounting Professionals in Bangladesh may help Accounting Firms to make investment in technology and improve the Accounting Technology Literacy of the University level and professional bodies accounting professionals of Bangladesh and can help the regulatory bodies to provide guidance to financial reporting using AI. To fill this gap, the present study is an empirical study of accounting practitioners in Bangladesh to get insight into the challenges of implementing AI.

1.2 Research Problem

It is thought that AI can streamline and hasten accounting and auditing, creating it more rapidly, precise and informative. Indeed, adoption isn't in reality, however. However, although a few have started experimenting with the AI-powered tools, there are others that haven't because of a variety of reasons, such as the unwillingness of their staff or organization to use new systems, systems are incompatible with the AIs, implementation costs are too great, employees have limited skills, and data privacy and security concerns are not managed. This is even more applicable in the case of developing countries like Bangladesh where infrastructure for a digital revolution (reliability, direction of the Internet connection) is still in its "very early stage. The barriers to AI adoption concept is conceptual, review based or from more developed economies which provide little empirical evidence of the barriers' impact in the context of accounting practitioners in Bangladesh. The local business, schools and regulators don't know on which areas to work if they don't have this evidence. In this context, the aim of the present study is to explore the correlation between six most cited barriers and the impacts on making the use of AI in Accounting effective, using an empirical approach to cater to this gap.

1.3 Research Questions

- RQ1: What are the top three advantages accounting professionals in Bangladesh see as having been gained from using AI in accounting?
- RQ2: What is the skill gap in AI between accountants and is the adoption of AI in accounting associated with this skill gap?
- RQ3: How Data Privacy and Security relates to the effective use of AI in Accounting?
- RQ4: The costs of using AI in accounting depend on the specific services required and the extent of usage. AI costs in accounting vary based on the services needed and how often they are used.
- RQ5: The costs of using AI in accounting depend on the specific services required and the extent of usage. AI costs in accounting vary based on the services needed and how often they are used.
- RQ6: Organizational resistance to change is linked with the effective use of AI in accounting.

- RQ7: The solution is that there are some accounting professionals who don't have the technical expertise to make effective use of AI in accounting.

1.4 Research Objectives

General Objective:

To understand the reality of the problem and constraint of using Artificial Intelligence in accounting practice from the accounting professionals of Bangladesh with the help of empirical study.

Specific Objectives:

- To understand the obstacles (skill gap, data security and privacy concern, implementation cost, system integration, and resistance to change) faced by the accounting professionals in Bangladesh for the adoption of AI.
- To examine the link between the ability to develop AI skills and the successful application of AI in accounting.
- To Discuss the potential data privacy and security concerns in the effective application of AI in Accounting.
- To evaluate the cost savings on effective implementation of AI in Accounting Firms and Corporate Finance Departments.
- To quantify the relationship between system integration problems, resistance to change and system technical knowledge and its effects on accounting professionals' use of AI systems.

1.5 Significance of the Study

The study's contribution to the literature is due to the absence of primary and empirically tested evidence about the barriers to the use of AI in an under-researched context (accounting in the emerging market). The result may guide the top management team of the company to invest in technology and trainings for better business and managerial practices, and the audit firms, trainings, and the accounting firms in Bangladesh, respectively. The results are used as the basis for the development of the on-going learning programmes, as well as guidance for regulatory organizations, including ICAB, on financial reporting with AI support.

1.6 Scope of the Study

Industry/Sector: Accounting / Financial Reporting in Accounting firms, Audit firms, corporate finance /accounting function in companies in Bangladesh (manufacturing /pharmaceutical companies).

Target Population: Accounting and finance professionals that use accounting information systems or are responsible for accounting information systems (AI Systems) include accounting officers, finance managers, auditors and accountants.

Geographic Location: Dhaka, Bangladesh where most corporate head offices and accounting firms are located.

Data Collection Time Period: 2026 August.

Time Period: Data were collected during August 2026.

Major Variables/Constructs: AI skill gap, data privacy and security concerns, implementation cost, system integration challenges, resistance to change, lack of technical knowledge, and effective use of AI in accounting.

Sample Size: 156 valid responses were obtained from accounting & finance professionals of Dhaka, Bangladesh.

Conditions: The study only includes organizations that are implementing/are planning to implement AI based accounting and/or ERP based solutions and excludes non-accounting IT professionals, retail investors and non-professional users of financial information.

2. Literature Review

2.1 Conceptual Discussion

The primary focus of using AI tools in accounting is the automation and optimization of various accounting tasks, such as bookkeeping, financial reporting, audit sampling, fraud detection, forecasting, and more. This study utilizes the following constructs as potential barriers to and enablers of AI adoption: (1) AI skill gap (accounting professionals' lack of skills to use accounting related AI tools); (2) data privacy and security concerns (concerns about the privacy and security of financial data managed by AI systems); (3) high implementation cost (the costs associated with implementing AI tools in accounting systems); (4) system integration challenges (technical difficulties when integrating AI tools with the existing accounting systems); (5) resistance to change (resistance to change the existing accounting practices because of implementing AI tools); and (6) lack of technical knowledge (lack of knowledge about how AI technology works in the accounting context). The outcome variable was the perceived benefits of AI (accuracy, efficiency and decision support) and the intentions to use AI more in the accounting work.

2.2 Relevant Theories

Both of the complementary approaches of technology-adoption research are used loosely as a basis for this research. This is because of the Technology Acceptance Model (TAM) that posits perceived ease of use and perceived usefulness as the drivers for a person's intention to use a new technology, and that skill gaps and technical-knowledge deficits are related to the ease of use, while perceived benefits are related to the usefulness. To some extent, the TEO framework, created by (Chowdhury, Latiff, & Mahmood, 2025) for an accounting-firm in Bangladesh is also relevant: it aggregates all barriers to adoption under one roof (Cost, Technological – System Integration, Organizational – Resistance to change and Environmental – Regulatory and Data-security). Most of the above assert that there is a relationship between individual level of the decision to adopt (skill and knowledge) and organizational/technological level of the decision (cost, integration, privacy, resistance) but state that this is a different aspect of the decision to adopt.

2.3 Empirical Literature

Studies have revealed several ways in which AI can revolutionize accounting. According to (Peng, et al., 2023) the efficiency of business financial activities and contribution toward achieving the sustainability objectives is improved and enabled by AI's ability to deliver these in real time respectively. (Adebisi, 2023) suggests that by having prediction analysis skills accounting information systems could reduce financial reporting error risk and also help detection and management of financial fraud and risks and (Noordin, Hussainey, & Hussainey, 2022) found that AI can lead to increased reliability of financial data and provide basis for more advanced audit judgements.

However, many researches also highlight problems organizations have faced while pursuing AI adoption and utilization benefits. One reported challenge (Almagtome, 2021) has discovered by employing quantitative research is in the effective utilization of AI-driven outputs when accounting data is involved, whereas (Faccia, Al Naqbi, & Lootah, 2023) concluded that the adoption of AI, blockchain and XBRL is primarily challenged by legacy systems, resistance from human users. Both (Alshurafat, 2023) and (Rawashdeh, 2023) raised awareness on potential threats from generative-AI tools like ChatGPT to the accounting professionals, in relation to increasing trends of AI utilization on the existing accounting environment. The study by (Zhang, et al., 2021) highlights that CPA exams, amongst other areas, have already been impacted by the advancement of AI in several countries. Apart from regulatory and ethical concerns, (Odonkor, Kaggwa, Uwaoma, Hassan, & Farayola, 2024) found workforce with AI literacy, data privacy and security, implementation cost to be the major obstacles to AI implementation in the field of accounting.

Although a number of specific researches about the application of AI in Bangladesh accounting system still limited but continually emerging. (Afroze & Aulad, 2020) surveyed audit practitioners in Bangladesh and found job security, lack of data-security and high implementation cost to be the challenges for adopting AI in audit and audit practitioners remained unaware on possible applications of AI in audit tasks. Using a TOE framework, (Chowdhury, Latiff, & Mahmood, 2025) identified organizational, technological and environmental factor with concern to security and trust of country to be influencers over intention of accounting professionals to adopt AI accounting system in Bangladesh.

Although not in the same study but still at a same perspective, at AIUB, an accounting research project headed by (Hasan & Moudud, n.d.) found that to benefit from a business information quality, operations and decision-making of a blockchain accounting system, organisation needs to overcome the main obstacles in adoption to improve the business performance; the study still focused on internal barriers of implementing a financial accounting system but without explicitly calling them accounting.

At national level research in AI is growing in many fields but largely constrained. A review of research on AI implemented in Bangladesh identified by AIUB stated the country only applies to agriculture, and health and hence the research project recommends an empirical analysis on specific industry, especially business & accounting. From national view point, this finding based on analysis of researches in AI applied across Bangladesh reiterated the need to analyze a specific sector of business and accounting as research field of AI for accounting is still restricted and narrow to be a business.

2.4 Research Gap

Studies that have already been made primarily take a conceptual nature; a research paper, a qualitative and conceptual approach of review-based data collection or based on bibliometrics or secondary source of data in most cases instead of survey data from many individuals as data to justify empirical finding is used in researches like by (Odonkor, Kaggwa, Uwaoma, Hassan, & Farayola, 2024), (Jrad, 2023) but there was not a huge number of respondents tested as well. Empirical research has mainly concentrated on the developed economic context and a very narrow range of fields except for accounting for instance the research by (Farič, et al., 2023) for radiology decision support system although the elements of ACB was broadly tested and not well understood on an accounting professional practice level, there is only one individual or firm based empirical study where more than one factor was examined for each barrier or none.

As compared to the previously mentioned factors, there are also researches conducted on particular factors where the study examined the impact of that factor on the business accounting system at the organizational level like (Chowdhury, Latiff, & Mahmood, 2025) which studies on organizational based factor.

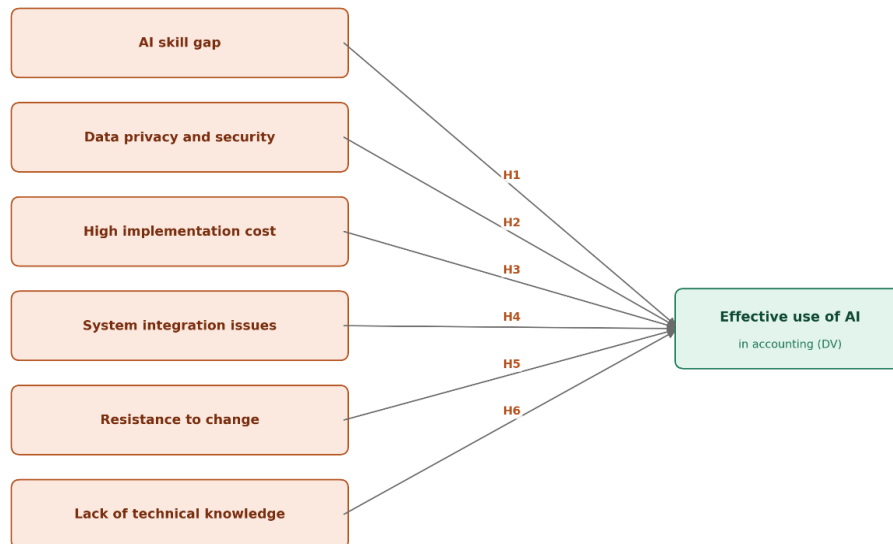
Thus, researches on combination of individual and organizational barriers tested on employees of different organizations such as accounting firms, audit firms or corporate finance/accounting departments are required for a complete analysis of the field. This study tries to contribute by examine the relationship between 6 individual and organizational variables in business accounting practices within the domain of Bangladesh and hence, tests for six hypotheses of this study by analyzing the data derived from 156 accounting & finance professionals working in Dhaka.

2.5 Research Model / Conceptual Framework

This study tests the hypotheses illustrated below to find a sensible relation between one of the constructs representing the barrier and that AI would contribute in business accounting for them by having 6 variables that has influence business accounting data from individual perspectives while other can be considered as organizational perspective.

- H1: The relation between AI Skill Gap and the efficient utilization of AI in accounting is of the statistically significant importance. AI skill gap is statistically significantly correlated with effective utilization of AI in accounting.
- H2: The relationship between data privacy and security concerns and the efficient utilization of AI in business accounting is significantly positive.
- H3: Implementation cost is negatively related to the effective utilization of AI in business accounting.
- H4: The relationship between effective utilization of AI in business accounting (H4) and challenges for integration of systems is positive and statistically significant.
- H5: Resistance to change influences significantly effective utilization of AI in business accounting.
- H6: Lack of Technical knowledge will positively influence effective utilization of AI in business accounting.

AI Skill Gap, Data Privacy and Security Concerns, High Implementation Cost, System Integration Challenges, Resistance to Change, Lack of Technical Knowledge are used as independent variables whereas Effective Utilization of AI in Accounting (perceived benefit and adoption intent) is treated as dependent variable. Each hypothesis is stated non-directionally due to previous research findings regarding increased and decreased implementation tendency concerning to the awareness from the arising of problems in implementing AI



3. Methodology

3.1 Research Approach and Design

This study used a quantitative research approach. Therefore, it enabled researchers to collect numerical data from respondents and examine the causal relationships between barriers variables and effective use of AI in accounting through statistical tests. The study implemented descriptive and explanatory cross-sectional survey design: Descriptive part for exploring major barriers associated with the use of AI in accounting, and the explanatory part for examining a causal relationship between those barriers variables and effective use of AI in accounting.

3.2 Population and Sample

The research surveyed population of accounting and finance professionals across the nation, for instance, accountant, accounting officer, accountant inspector, auditor, finance manager and others in accounting and audit firms as well as private accounting /finance department in corporate sector. Both purposive and convenience sampling strategies are combined in order to identify sample relevant to study question and convenience is enabled by gathering sufficient response in expected timeframe and the research obtained one hundred and fifty six total valid responses and which falls in a range of 150-200 targeted respondents.

3.3 Data Collection

Primary source data were collected via a structured, self-administrated online questionnaire which distributed to accountant and finance professionals in Dhaka, from August 2026. Secondary data were collected from variety of sources that consists of journals, conference proceedings and industry reports, and were adopted to support the literature survey and questionnaire design process.

3.4 Measurement of Variables/Constructs

A pre-developed, closed-ended questionnaire consisting of 38 items, with scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) representing five-point Likert scale. Five items were designed to measure each of the six independent variables (AI skill gap, Data privacy and security concern, High cost of implementation, System integration challenges, resistance toward changes and lack of professional knowledge about technical requirement) and eight items measures one dependent variable (Effective use of AI in accounting), which are listed in Appendix A, the question for demographic profiling, current occupation of respondents, years of working, organization classification, status of use of AI, degree of knowledge of AI, were collected through separate set of questions as one separate question was intended for exploring the single barrier perceived by respondents to be most problematic among others on adoption of AI in accounting profession.

3.5 Data Analysis

After collection, responses were exported for analysis using Microsoft Excel and Python-based statistical routines similar to SPSS in order to test hypotheses developed along the stated problem. Statistical techniques were employed in four stages: (i) Descriptive statistical techniques such as frequency, percentages, mean and standard deviation were used to characterize respondents and summarize each study construct, (ii) Reliability analysis was carried out using Cronbach's Alpha on a multi-item construct to measure the internal consistency of it, (iii) Pearson correlation technique was employed to ascertain and measure the strength of bivariate association between barrier construct and dependent variable. (iv), multiple regression was used to estimate the unique contribution of each six barrier construct on effective use of AI in accounting.

4. Data Analysis and Results

4.1 Respondent Profile

A total of 156 valid responses were received. The demographic and background information for the respondents is summarized in Table 1.

Table 1: Respondent Profile (N = 156)

Category	Group	n	%
Current Position	Accountant	47	30.1%
	Accounting Officer	37	23.7%
	Auditor	34	21.8%
	Finance Manager	31	19.9%
	Other	7	4.5%
Years of Experience	Less than 1 year	16	10.3%
	1–3 years	49	31.4%
	4–6 years	37	23.7%
	7–10 years	34	21.8%
	More than 10 years	20	12.8%
Organization Type	Manufacturing Company	45	28.8%
	Audit Firm	43	27.6%
	Pharmaceutical Company	38	24.4%
	Accounting Firm	22	14.1%
	Other	8	5.1%
Organization Currently Uses AI	Yes	94	60.3%
	Planning to use AI	37	23.7%
	No	25	16.0%
Familiarity with AI in Accounting	Extremely familiar	11	7.1%
	Very familiar	57	36.5%
	Moderately familiar	47	30.1%
	Slightly familiar	33	21.2%
	Not at all familiar	8	5.1%

The sample was dominated by accountants (30.1%) and accounting officers (23.7%) and was skewed to relatively early-to-mid career professionals (55.1% with 1-6 years' experience). Most found employment in manufacturing firms or audit firms, and 60.3% indicated that their organization had already implemented AI in accounting or financial business, while 23.7% planned to do so. The overall level of familiarity with AI in accounting was moderate to high, with 73.7% of respondents indicating they were at least moderately familiar with AI technologies in accounting.

4.2 Descriptive and Reliability Results

Mean values, standard deviations, and reliability coefficient Cronbach's Alpha for the seven measures using the aggregate (average) score of a measure's items are shown in Table 2. Cronbach's Alpha demonstrated acceptable to excellent internal consistency for all seven measures ($>.70$). The items under each of the constructs all added up to reflect their respective underlying constructs and measured them well.

Table 2: Descriptive Statistics and Reliability of Study Constructs

Construct	Items	Mean	SD	Cronbach's α
AI Skill Gap	5	3.47	0.67	0.899
Data Privacy and Security Concerns	5	3.41	0.71	0.909
High Implementation Cost	5	3.37	0.74	0.917
System Integration Challenges	5	3.40	0.70	0.915
Resistance to Change	5	3.37	0.79	0.940
Lack of Technical Knowledge	5	3.42	0.72	0.922
Effective Use of AI in Accounting	8	3.50	0.61	0.931

All construct means fell between 3.37 and 3.50 on a five-point scale, indicating the average respondent tended to agree each of the six barriers exists, and agreed slightly with statements that the measures' positive framing about AI benefits and their willingness to engage more with AI were accurate statements of their situation.

4.3 Correlation Analysis

The Pearson's correlation matrix of the 6 barrier variables with effective use of AI in accounting is shown in Table 3, below. Each correlation value was positive and statistically significant at the .001 level.

Table 3: Pearson Correlation Matrix (n = 156)

Construct	1	2	3	4	5	6	7
1. AI Skill Gap	1.00						
2. Data Privacy & Security	0.72	1.00					
3. Implementation Cost	0.78	0.71	1.00				
4. System Integration	0.81	0.72	0.81	1.00			
5. Resistance to Change	0.72	0.62	0.71	0.82	1.00		
6. Lack of Tech. Knowledge	0.65	0.52	0.65	0.69	0.66	1.00	
7. Effective Use of AI	0.74	0.66	0.75	0.76	0.73	0.69	1.00

The most highly correlated variable with effective use of AI in accounting was system integration difficulty ($r=.76, p<.001$), closely followed by high implementation cost ($r=.75, p<.001$), and AI skills gap ($r=.74, p<.001$). Other correlates that were more highly related than with some of the other barriers include resistance to change ($r = .73, p < .001$), lack of technical know-how ($r=.69, p<.001$), and data privacy and security issue ($r=.66, p<.001$). The relationships among the 6 barrier variables were also high (r values ranged from .52 to .82) suggesting that professionals who perceived a barrier to be important tended to also rate the other barriers high as well.

4.4 Hypothesis Testing Multiple Regression

The six barrier constructs were all entered simultaneously as predictors of effective AI usage in accounting for the initial multiple linear regression. The overall model was significant, $F(6, 149) = 57.54, p < .001$, with about 70% of the variance in effective AI usage explained ($R = .699$, Adjusted $R = .686$). The beta coefficients of each of the predictors are shown in Table 4.

Table 4: Multiple Regression Results (Dependent Variable: Effective Use of AI in Accounting)

Predictor	B	SE	t	p	VIF
(Constant)	0.739	0.158	4.68	< .001	—
AI Skill Gap	0.146	0.078	1.87	0.064	3.68
Data Privacy and Security Concerns	0.099	0.061	1.62	0.107	2.44
High Implementation Cost	0.181	0.070	2.57	0.011*	3.58
System Integration Challenges	0.053	0.091	0.58	0.563	5.50
Resistance to Change	0.157	0.062	2.51	0.013*	3.25
Lack of Technical Knowledge	0.176	0.056	3.15	0.002**	2.14

Note: $A < 0.05, b < 0.01$. Dependent variable is effective AI usage in accounting. $R=.699$, Adj. $R=.686$, $F(6,149) = 57.54, p<.001$. Although all VIF scores were well under the 10 values, the system integration challenges ($VIF=5.50$) and AI skill gap ($VIF=3.68$) variables had considerable overlap with the predictors.

It was found that high implementation costs ($B = .181, p = .011$), the resistance to change ($B = .157, p = .013$), and a lack of technical knowledge ($B = .176, p = .002$) individually remained statistically significant predictors in the unique contribution to effective AI usage when controlling for the overlap in variance among the six barrier predictors. This confirms H3, H5, and H6. The AI skill gap was marginally significant ($p=.064$), partially supporting H1. Although both data privacy and security concerns ($p=.107$) and system integration challenges

($p=.563$) were statistically significant predictors when looking at bivariate correlates between individual barriers and effective AI usage (Table 3), neither were significant unique predictors in the full model once their overlap with the other five barriers was considered, and therefore H2 and H4 were not supported in the regression model.

4.5 Summary of Findings

The sample consisted primarily of early to mid-career accountants. 60.3% of respondents already work for organizations using AI for accounting purposes. The barrier scales (all six barrier constructs plus the effective-use construct) all demonstrated good to excellent reliability (all $\alpha=.899-.940$). All six barriers were positively and significantly correlated with AI effective-use ($r=.66$ to $.76$, all $p<.001$). The simultaneous regression model was able to explain 69.9% of the variance in AI effective-use. The most significant unique predictors of effective use were AI implementation cost, readiness to embrace change and technical expertise, and technical knowledge (all greater than or equal to $|-0.200|$), while AI skill gap was also marginally significant. The most frequently selected barrier to accounting use of AI was skill gap (35.3%), followed by data privacy and security concerns (23.7%).

5. Discussion and Conclusion

5.1 Discussion of Findings

These findings provide evidence that all six barriers identified in our model (AI skills gap, data privacy and security issues, cost, system integration, resistance to change and lack of technical knowledge) are significantly associated with the extent of effective use of AI in accounting among Bangladeshi professionals, aligning with barriers mentioned in previous conceptual and empirical work (Odonkor, Kaggwa, Uwaoma, Hassan, & Farayola, 2024), (Afroze & Aulad, 2020),

+ (Chowdhury, Latiff, & Mahmood, 2025) This broad agreement lies in the spirit of the initial study aims.

One specific outcome worthy of note however is that rather than negatively influencing the use of AI as we would expect, that the correlations were positive, where professionals who reported a stronger sense of awareness about the obstacles actually reported themselves being far better able to reap benefits from and utilize the AI technologies. The cause of such an initially counter intuitive result we hypothesize to be the respondent sample composition where 60.3% work in firms where they are already interacting with AI, and also the generally medium to high level of exposure many participants had to such technologies. This indicates those who actually have interacted with AI will be more aware of what can and is being used, and will concomitantly perceive both the benefits of the technology and its barriers to implementation, which would lead a low knowledge person to report low on both. We believe that this effect can be accounted for through the concept of engagement and exposure to technology that often increases simultaneous perception of benefits and costs. This correlates with the principles underpinning the Technology Acceptance Model, and we believe this element of familiarity should be measured explicitly in future studies as opposed to being an assumed background variable.

In terms of specific barrier influences High implementation costs, resistance to change, and lack of technical skills were the stronger predictors in the regression model-consistent with (Afroze & Aulad, 2020) report on cost being a major factor hindering the adoption of AI in Bangladesh's audit industry, and (Rawashdeh, 2023) remark about resistance toward change being connected with fear of job loss. The failure of data privacy and security, system integration obstacles to maintain their statistical significance despite their bivariate correlations could possibly be explained through strong intercorrelations (up to .82) rather than the presence of nothing, individuals who perceive one barrier as being strongly operative are inclined to say all aspects are operative to a certain extent.

5.2 Theoretical Implications

By employing primary survey data from an emerging-market accounting environment, this study reinforces and adds to the existing body of the technology adoption literature showing the interdependent nature of individual-level barriers (i.e., skill-gap, technological know-how), and the technological-level barriers (i.e., cost, system integration, resistance to change, and data security). This is also the idea of how barriers should be analyzed as a group of related attitudes rather than independent issues or obstacles in technology adoption literature (as applied in (Chowdhury, Latiff, & Mahmood, 2025), with TOE framework). As familiarity with technology might moderate relations between barriers and individual outcomes, future study may benefit on addressing this variable in greater depth.

5.3 Practical/Managerial Implications

For accounting firms and business finance organizations, this study suggests that high implementation cost, change readiness and technical know-how of individuals within the firms are the barriers more likely to directly influence technology success. Educators like those at AIUB, as well as the professional bodies (e.g., ICAB) will benefit on including AI related technical training courses in their programs for the accountants. The high level of importance of the data privacy and security barrier (with mean of 3.41) still reveals strong need on clear policies toward this issue, but as seen in the combined analysis, maybe not an important unique predictor.

5.4 Limitations

The present study is cross-sectional research and there is no way to tell which of the variable is determined which of it and vice versa. Sampling method of purposive and convenient may have not fully representative of general accountants working in Bangladesh. Due to high intercorrelation among all variables, it is hard to distinguish of the importance of some barrier such as system integration with skill-gap. The dependent construct that uses both benefit and usage intention is not exactly the usage. The present study only includes accountant working in Dhaka region so that it does not include accountants working in the other parts of Bangladesh.

5.5 Future Research / Recommendations

The longitudinal research is encouraged to illustrate the perception on the barriers and how accounting professionals develop and use AI in future as they involve more in experience regarding this technology Due to the evidence found in this study, an experimental design studying the interaction effects of a familiarity/ prior

exposure to AI and these barriers on usage outcome would also contribute in understanding this adoption process more deeply. The next research would attempt to investigate accountants in a diverse range of regions throughout Bangladesh instead of just Dhaka. A qualitative interview study with accountants would provide more in depth reasons behind their attitudes on how strong barrier correlates with high use intention for the profession as suggested in this study. Accounting professionals are advised to improve their technological know-how and address organizational issues such as change barriers and high cost related to the use of the technology as these were strong significant predictors for the accounting professionals who are able to effectively utilize AI in the work.

5.6 Conclusion

In a study of the six barriers of AI adoption in accounting (skill-gap, data privacy/security concern, high implementation cost, system integration issue, resistance to change, and technical know-how) from 156 accounting and finance professional residing in Dhaka, Bangladesh, all six factors had significant correlation with the perceived ability to effectively utilize the technology. Cost, resistance to change and technical know-how were indicated as three most significant predictors which solely can explain of about 70% variation in the study of effective utilization by them all combined. As opposite from what might be assumed as deterrences from adoption of the technology, these barriers are observed together with greater perceived benefits and intentions of usage by users who have more familiarity of technology. For the accountants in Bangladesh firms, along with higher educational institutions such as AIUB as well as professional accounting bodies such as ICAB, these findings are beneficial to recognize importance of the three main critical variables when taking into the account of utilizing the said technology for the professional works and for the regulatory bodies and policymakers concerned with the developing AI technologies.

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Appendices

Appendix A

Survey Instrument Construct Items (5-point Likert scale: 1 = Strongly Disagree to 5 = Strongly Agree)

AI Skill Gap

- I have sufficient skills to use AI tools for accounting activities.
- Lack of AI-related skills among accounting professionals is a major barrier to AI adoption.
- Accounting professionals need additional training to use AI effectively.
- Lack of skilled employees makes AI adoption difficult in my organization.
- My organization provides adequate training on AI-based accounting technologies.

Data Privacy and Security Concerns

- I am concerned about the privacy of accounting data when using AI.
- Data security risks discourage my organization from adopting AI.
- I am concerned that AI systems may expose confidential financial information.
- Data privacy concerns reduce my willingness to use AI in accounting.
- Protecting financial information is a major challenge when implementing AI.

High Implementation Cost

- The initial cost of implementing AI is a major barrier for my organization.
- The cost of maintaining AI-based accounting systems is a concern.
- Limited financial resources restrict AI adoption in accounting.
- High implementation costs discourage my organization from adopting AI.

- The financial investment required for AI adoption is difficult for many organizations to manage.

System Integration Challenges

- Integrating AI with existing accounting systems is difficult.
- Existing accounting software may not be compatible with AI technologies.
- Technical problems make AI implementation difficult in accounting.
- Upgrading existing accounting systems is necessary before adopting AI.
- System integration problems reduce the effective use of AI in accounting.

Resistance to Change

- Employees may be unwilling to change traditional accounting practices.
- Resistance to change is a major barrier to AI adoption in accounting.
- Employees may fear that AI could reduce accounting-related job opportunities.
- Lack of employee support makes AI implementation difficult.
- Organizational resistance can delay the adoption of AI in accounting.

Lack of Technical Knowledge

- Accounting professionals may lack the technical knowledge required to use AI.
- Lack of understanding of AI technology makes adoption difficult.
- Accounting professionals need additional technical skills to work effectively with AI.
- Lack of technical knowledge reduces confidence in using AI-based accounting systems.
- Lack of technical expertise limits the effective use of AI in accounting.

Effective Use of AI in Accounting

- AI improves the accuracy of accounting activities.
- AI reduces the time required to complete accounting tasks.
- AI improves the quality of financial reporting.
- AI helps identify accounting errors or unusual financial transactions.
- AI supports better financial decision-making.
- AI improves the overall efficiency of accounting activities.
- AI can be effectively used in accounting when major barriers are addressed.
- I intend to use AI more frequently in accounting activities.

Appendix B: SPSS Output

Table B1: Reliability Statistics (Cronbach's Alpha) — SPSS Output

	Cronbach's Alpha	N of Items
SkillGap	0.899	5
Privacy	0.909	5
Cost	0.917	5
Integration	0.915	5
Resistance	0.940	5
TechKnowledge	0.922	5
EffectiveUse	0.931	8

Table B2: Descriptive Statistics — SPSS Output (corresponds to Table 2)

	N	Minimum	Maximum	Mean	Std. Deviation
SkillGap	156	1.200	4.600	3.471	0.673
Privacy	156	1.000	4.800	3.409	0.705
Cost	156	1.200	4.600	3.372	0.736
Integration	156	1.200	4.600	3.399	0.703
Resistance	156	1.000	5.000	3.367	0.793
TechKnowledge	156	1.600	4.800	3.423	0.718
EffectiveUse	156	1.250	4.500	3.501	0.609

Table B3: Pearson Correlations — SPSS Output (corresponds to Table 3)

	SkillGap	Privacy	Cost	Integration	Resistance	TechKnowledge	EffectiveUse
SkillGap	1.000	0.719	0.775	0.813	0.717	0.648	0.743
Privacy	0.719	1.000	0.707	0.716	0.620	0.519	0.662
Cost	0.775	0.707	1.000	0.811	0.707	0.653	0.753
Integration	0.813	0.716	0.811	1.000	0.820	0.693	0.762
Resistance	0.717	0.620	0.707	0.820	1.000	0.659	0.731
TechKnowledge	0.648	0.519	0.653	0.693	0.659	1.000	0.690
EffectiveUse	0.743	0.662	0.753	0.762	0.731	0.690	1.000

Table B4: Regression Model Summary — SPSS Output

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.836	0.699	0.686	0.341

Table B5: Regression ANOVA — SPSS Output

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	40.197	6	6.700	57.537	< .001
Residual	17.350	149	0.116		
Total	57.547	155			

Table B6: Regression Coefficients — SPSS Output (corresponds to Table 4)

Model	Unstandardized B	Std. Error	t	Sig.	Tolerance	VIF
1 (Constant)	0.739	0.158	4.678	< .001		
SkillGap	0.146	0.078	1.868	0.064	0.272	3.678
Privacy	0.099	0.061	1.621	0.107	0.410	2.442
Cost	0.181	0.070	2.573	0.011	0.279	3.579
Integration	0.053	0.091	0.580	0.563	0.182	5.497
Resistance	0.157	0.062	2.513	0.013	0.307	3.254
TechKnowledge	0.176	0.056	3.145	0.002	0.468	2.139