

Impact of Accounting Information Systems (AIS) On Internal Auditors: A Comparative Study between Bangladesh and Turkey

Maruful Islam

Lecturer in Accounting

Department of Business Administration

International Islamic University Chittagong

Abstract

Technological improvements have led to a widespread use of accounting information systems (AIS) in companies and industries across the globe. Moreover, AIS offers thorough and trustworthy information to both internal and external users by typically focusing on six main areas: people, procedures, data, software, IT infrastructure, and internal controls. The aim of this study is to determine how AIS have affected internal auditors in Bangladesh and how those effects compare to or diverge from those found in a related and unique study carried out in Turkey. Both primary and secondary sources were used to gather the data. Using close-ended self-administered questionnaires I analyzed the impact of accounting information systems on internal auditors in Bangladesh and using cross-country analysis measured these results against a similar study conducted in Turkey. In this work, SPSS is employed for validation. I posed 12 questions in the questionnaire, and 60 internal auditors from multiple sectors and various regions of Bangladesh responded. The results strongly indicate that internal auditors in Bangladesh believe that AIS contributes positively to their work, and the conclusions are remarkably similar to those of the prior study conducted in Turkey. This study definitively answers the question regarding the positive impact of AIS on internal auditors in Bangladesh and having similarities with Turkey. This study is relevant to a wide range of professions, not only internal auditors, because it emphasizes the relevance of information technology in the corporate world.

Keywords: Accounting information Systems; Internal Auditors; Bangladesh; Turkey; Comparative Study

Introduction:

In today's highly competitive and rapidly evolving global business landscape, effective business management is reliant on the use of computer systems and software programs to deliver accurate and timely information (Bae & Ashcroft, 2004). Information technology has become an essential component for achieving success in the business world (Qatawneh, 2012). Accounting information systems (AIS), which are integral to organizations, have undergone significant changes in how they capture, process, store, and distribute information. AIS play a vital role in managing an organization and implementing internal control systems (Sambasivam & Assefa, 2013). These computer-based systems process financial information and facilitate decision-making for coordinating and controlling organizational activities (Nicolaou, 2000). They perform functions such as processing, categorizing, gathering data, and reporting financial events to provide relevant information for tracking performance, drawing attention, and making informed decisions (Boockholdt, 1999). AIS is considered crucial for efficient decision-making and control within organizations (Sajady et al., 2008). They encompass six key aspects: people, procedures, data, software, information technology infrastructure, and internal controls. People refer to the users of the system, including consultants, accountants, managers, and business analysts. Procedures encompass the methods used to store, collect, and retrieve data. Data encompasses all financial information related to an organization's business practices. Software is a term that encompasses computer programs designed to access, store, manipulate, and interpret a company's financial information. Information technology infrastructure consists of the necessary hardware to operate AIS. Internal controls involve safeguarding data against unauthorized access and restricting access to authorized

users within the company. Therefore, AIS play a critical role in all aspects of business operations, especially as financial and operational transactions become increasingly complex and voluminous. In the modern business world, auditors must possess knowledge of both accounting and technology (Tan, 2016).

Internal auditing, as defined by the Institute of Internal Auditors (IIA), is an impartial advisory process focused on improving and promoting an organization's functioning. This is accomplished through the application of a methodical and rigorous method to assess the efficiency of risk management, control systems, and overall governance (The Institute of Internal Auditors). The IIA also outlines specific attributes that internal auditors should possess, including integrity, objectivity, confidentiality, and competence. These qualities help establish trust and enable organizations to rely on the judgments made by internal auditors. In relation to objectivity, internal auditors are required to uphold the utmost level of professional impartiality while collecting, assessing, and conveying information (The Institute of Internal Auditors). Confidentiality entails internal auditors respecting the information they receive, while competence requires them to apply their knowledge, skills, and experience effectively in their role. Accounting Information Systems (AIS) play a crucial role for internal auditors as they handle transaction processing and maintain financial records. These systems are responsible for identifying, analyzing, classifying, recording, summarizing, and reporting transactions and other events (Neogy, 2014). To assess the usefulness of AIS for internal auditors in Bangladesh, a questionnaire survey method was employed, I posed 12 questions in the questionnaire, and 60 internal auditors from multiple sectors and various regions of Bangladesh willingly responded. After analyzing the impact of accounting information systems on internal auditors in Bangladesh I did a cross-country analysis, and measured the survey results against a similar study conducted in Turkey. It is worth noting that this study appears to be the first to investigate the impact of AIS on internal auditors in Bangladesh, to the best of my knowledge. (Tan, 2016).

Literature Review:

Accounting information systems provide fundamental data to decision-makers for use in making decisions. As a consequence of advances in information technology, information reporting has undergone substantial changes. As a result, the qualities of the material that is currently being prepared can aid decision-makers in their efforts to identify additional options for solving the issue at hand. The ability to access information pertinent to an organization's primary transactions leads to the generation of categorized, specific information, which makes it simpler to make difficult decisions in any situation (Mia & Chenhall, 1994).

Kim (1989) argues that the effective use of AIS is contingent upon the users' perceptions of the quality of the information being provided to them. In general, the trustworthiness of the information, the form the reporting takes, the timeliness of the information, and how relevant it is to the decisions all play a role in determining the quality of the information. The effectiveness of accounting information systems also depends on the perception of decision-makers regarding the usefulness of the information generated by the system to satisfy informational requirements for operation processes, managerial reports, budgeting, and internal control.

Tan (2016) investigated the impact of AIS on internal auditors in Turkey. According to the findings, AIS has been of great assistance to the work of internal auditors in Turkey. AIS is compatible with enterprise resource planning and other management information systems. By providing a computer-based database system to store and retrieve data, they promote the efficient use of resources and operations and aid in the efficient tracking of all events.

Sajady et al. (2008) conducted an investigation into the efficiency of the accounting information systems deployed by the financial managers of companies that are listed on the Tehran Stock Exchange. According to the findings, AIS may facilitate improved decision-making on the part of managers, more efficient internal control systems, an improvement in the quality of financial reporting, and the facilitation of the process of financial transactions.

Mndzebele (2013) investigated research into the significance of accounting information systems for carrying out internal controls in hotels. Within the confines of the scope of the inquiry, a quantitative methodology was utilized. According to the findings of the research, AIS has a positive effect on the internal controls of

enterprises. Because of the existence of effective internal controls, hotels were able to do what they set out to do and succeed.

Sambasivam & Assefa (2013) examined how Ethiopian manufacturing industries were affected by accounting information systems. According to the results of the survey they conducted with industry experts, accounting information systems improve the quality of financial reporting. Additionally, the architecture of the system has an effect on accounting information systems and ultimately results in a more efficient internal control system.

Alsharayri (2012) investigated the performance of accounting information systems implemented in Jordanian private hospitals. It has been found that the presence of current technology adds positively to the performance of accounting information systems and that human staff skills are vital for properly employing accounting information systems within businesses.

Neogy (2014) carried out an analysis of the effectiveness of the accounting information systems deployed by a number of Bangladeshi telecommunications businesses. According to the findings of a survey held with industry specialists, AIS is both capable of assisting in the taking of effective decisions and absolutely important for the decision-making process in every functional area of organizations and businesses.

Research Methodology:

Research Design:

This study employs a questionnaire survey as the primary research method to investigate the impact of Accounting Information Systems (AIS) on internal control and auditing. The questionnaire was structured similarly to the one used by Mndzebele (2013) in their study on AIS usage for effective internal controls in hotels.

Data Collection:

Sampling Method

This study employs a mixed-methods approach to gather data. Primary data will be collected using self-administered close-ended questionnaires. These questionnaires were developed based on a review of relevant literature and will serve as the primary tool for assessing the impact of AIS on internal auditors in Bangladesh. The participants for this study were selected through LinkedIn, a business-oriented social networking service widely used for professional networking. I specifically targeted individuals working as internal auditors in organizations utilizing AIS.

Questionnaire Development

I designed a structured questionnaire consisting of 12 questions related to the influence of AIS on internal control and auditing. The questionnaire was pre-tested for clarity and relevance to ensure its effectiveness in gathering the required data.

Sample Size

The study will target a diverse group of internal auditors from various sectors and regions within Bangladesh to ensure a representative sample. A total of 60 internal auditors will be selected as respondents for the questionnaire. The auditors consented to participate in this study and completed the questionnaire. This sample size was considered sufficient for the research objectives.

Participant Demographics:

Industry Coverage

The study participants were drawn from a diverse range of industries, as indicated in Table 1. This diverse representation ensures that the research findings are applicable across various business sectors.

Educational and Experience Levels

Table 2 provides insights into the educational and experience levels of the participants. Among the 60 internal auditors surveyed, 11.7% held only bachelor's degrees, while 83.3% had both bachelor's and master's degrees. Approximately 66.7% of respondents possessed mid-level experience, with 20% at the entry-level and 13.3% at the senior-level. It is important to note that years of expertise refer exclusively to the number of years respondents have worked as internal auditors, excluding experience in other roles.

Average Work Experience

The average number of years of work experience among the survey respondents was calculated to be 5.31 years.

Data Analysis:

Quantitative Analysis

The quantitative data obtained from the questionnaires will be analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, such as mean, median, and standard deviation, will be calculated to summarize the responses.

Cross-Country Analysis

To compare the findings with the related study conducted in Turkey, a cross-country analysis will be performed. This analysis will identify similarities and differences in the impact of AIS on internal auditors in Bangladesh and Turkey.

Ethical Considerations:

The research adheres to ethical guidelines, ensuring the confidentiality and anonymity of participants. Informed consent was obtained from all respondents before participation.

Limitations:

It is important to acknowledge potential limitations, including the use of a questionnaire survey, which may be subject to response bias. Additionally, the study's generalizability may be limited to the industries represented in the sample.

Table 1. Industrial Breakdowns of Respondents.

Leather Industry	Electric Cable Manufacturing Industry
Export Oriented Industry	Transportation, Cargo and Logistic Industry
Textile Industry	Cement Industry
Agricultural product Industry	Consultancy Firm Industry
Audit firm	Pharmaceutical Industry
Non-government Organization	Construction Industry
Food and Beverages production Industry	Construction Equipment Industry
RMG Industry	Non-Bank Financial Institution
Steel Industry	FMGC Industry
Manufacturing Industry	Real Estate Industry
Banking Industry	Energy Industry

Chemical Industry	Trading Industry
Microfinance Organization	Ceramic Industry

Table 2. Educational Level, Job Experience Level and Work Experience Level.

Educational Level		Job Experience Level			Average work experience (internal auditors)
Bachelor's Degree	Master's Degree	Beginning Level	Mid-Level	Senior Level	
11.7%	83.3%	20%	66.7%	13.3%	5.31 years (average for all participants)

Empirical Result:

Table 3 presents the survey results. More comprehensive details and data can be found in Appendix A.

In this section, I present the empirical results obtained from a survey conducted to assess the perceptions and opinions of participants regarding the role of Accounting Information Systems (AIS) in enhancing internal controls and auditing. The survey utilized a Likert scale, with a rating of 5 indicating "strongly agree," 4 for "agree," 3 for "neutral," 2 for "disagree," and 1 for "strongly disagree." More comprehensive details and data can be found in Appendix A.

Question 1: AIS Significantly Enhance Internal Controls and Auditing (Average Rating: 4.33)

The participants' responses strongly indicate that the majority of them "strongly agreed" with the statement that AIS played a significant role in enhancing internal controls and auditing. The average rating for this question was 4.33, reflecting a consensus among the participants on the positive impact of AIS on internal controls and auditing processes. This finding highlights the importance of AIS in maintaining the integrity and reliability of financial information.

Question 2: Effective Integration of AIS with Management Systems, Including ERP (Enterprise Resource Planning) (Average Rating: 4.14)

The second question explored the integration of AIS with various management systems, including Enterprise Resource Planning (ERP) systems, which are widely recognized as critical components of management information systems. Participants showed a consensus that AIS were effectively integrated with these systems, with an average rating of 4.14. This integration is crucial as it enables organizations to streamline their operations and enhance decision-making by providing a comprehensive view of business activities.

Question 3: Efficient Event Tracking by AIS (Average Rating: 3.55)

Regarding the third question, participants generally agreed that AIS effectively keep track of all events in an efficient manner. However, it is worth noting that 11 participants expressed a neutral stance on this matter, as indicated in Appendix A. This result suggests that while AIS are generally perceived as efficient in event tracking, there may be room for improvement or variability in their performance in some cases.

Question 4: AIS Provide Computer-Based Database Systems (Average Rating: 4.23)

The fourth question inquired whether AIS provided a computer-based database system to store and retrieve data. The majority of participants agreed with this statement, affirming that AIS offer a robust infrastructure for storing and retrieving data. This capability is vital for auditors, as it facilitates convenient access to information, ultimately aiding in the audit process.

Question 5: AIS Contribute to Reliability in Financial Reporting (Average Rating: 4.18)

AIS were found to contribute significantly to the reliability of financial reporting, including adherence to generally accepted accounting principles (GAAP), international financial reporting standards (IFRS), business activity statements (BAS), and Bangladesh financial reporting standards (BFRS). Most participants in-

icated that AIS offered a reasonable guarantee that transactions were accurately recorded, aligning with the requirements of these reporting standards. This finding underscores the role of AIS in ensuring compliance and the accuracy of financial statements.

Question 6: AIS Promote Optimal Resource Utilization and Operations (Average Rating: 4.37)

Respondents unanimously acknowledged that AIS played a vital role in promoting the optimal and productive utilization of resources and operations within organizations. This acknowledgment underscores the importance of AIS in enhancing efficiency and effectiveness in resource management, ultimately contributing to better control over the accuracy and dependability of financial information. AIS empower managers by providing comprehensive insights into business operations, enabling them to make informed decisions.

Question 7: Improved Adherence to Legal Requirements and Accounting Standards (Average Rating: 4.25)

The majority of participants agreed that AIS significantly improved adherence to legal requirements and accounting standards. This compliance is critical as it helps prevent illegal or fraudulent behavior and ensures the smooth operation of the system. AIS are instrumental in ensuring that organizations comply with regulatory frameworks, reducing the risk of legal and financial consequences.

Question 8: AIS Enhance Controls by Limiting Data Access (Average Rating: 4.13)

Question eight assessed whether AIS improved controls by limiting access to company data. Most participants agreed with this statement, recognizing that AIS were integrated with other management information systems. The consensus among respondents was that allowing every employee unrestricted access to the system could create risks for internal auditors. This finding emphasizes the importance of internal control systems and security authorization to efficiently conduct audits.

Questions 9-11: AIS Contribute to Control Structure (Average Rating: 4.30)

The next three questions, closely related to control structure, garnered strong agreement from most respondents. AIS were acknowledged for their role in establishing control structure through the implementation of policies, procedures, organizational designs, and physical barriers. These controls encompass preventive measures to discourage errors or irregularities and detective controls designed to identify errors or irregularities after they have occurred. The high average rating of 4.30 highlights the perceived effectiveness of AIS in enhancing control mechanisms.

Last Question: AIS Increase Awareness of Internal Controls (Average Rating: 4.20)

In the final question, participants were asked whether AIS had an impact on internal controls by increasing awareness of their importance. The majority of respondents concurred that AIS played a significant role in increasing awareness regarding the importance of internal controls. This finding suggests that AIS serve not only as tools for control but also as instruments for promoting a culture of control consciousness within organizations.

The empirical results presented in Table 3 shed light on the pivotal role of Accounting Information Systems (AIS) in enhancing internal controls and auditing processes within organizations. The findings indicate a strong consensus among participants on the positive impact of AIS across various dimensions, including integration with management systems, event tracking, database functionality, reliability in financial reporting, resource utilization, adherence to legal requirements, access controls, and the establishment of control structures. Moreover, AIS were recognized for their contribution to increasing awareness of the importance of internal controls.

These results underscore the importance of AIS in modern organizations, highlighting their multifaceted role in promoting efficiency, compliance, and transparency. As organizations continue to rely on digital systems and data-driven decision-making, the significance of AIS in maintaining the integrity of financial information and supporting effective auditing practices cannot be overstated. Furthermore, the findings suggest areas where organizations can focus on further improving the performance of AIS to maximize their benefits in the realm of internal controls and auditing.

Table 3. Results of Questionnaire Survey.

	Number of Participants	Mean	Std. Deviation	Variance
AIS have contributed to internal controls and auditing	60	4.33	1.020	1.040
AIS are integrated with other management information systems	60	4.22	.885	.783
AIS keep track of all events in an efficient manner	60	3.90	.986	.973
AIS provide a computer-based database system to store and retrieve data	60	3.78	1.027	1.054
AIS contribute to the reliability of financial reporting i.e., GAAP, IFRS, BAS and BFRS	60	4.15	1.039	1.079
AIS encourage efficient and effective use of resources and operations	60	3.87	1.049	1.101
AIS enhance compliance with laws and accounting standards	60	4.00	.921	.847
AIS improve controls by limiting access to company data	60	3.88	1.059	1.122
AIS have policies, procedures, organizational designs, and physical barriers that contribute to the control structure	60	3.68	1.049	1.101
AIS provide preventive controls, which are designed to discourage errors or irregularities	60	3.75	.895	.801
AIS comprise detective controls, which are designed to identify errors or irregularities after they have occurred	60	4.00	.939	.881
AIS results increase awareness of the need for internal controls, which increases the budget and success	60	3.87	1.033	1.067

Discussion And Comparative Analysis:

In this section, I undertake a comparative analysis leveraging the survey results obtained through the questionnaire study, juxtaposing them with those emanating from a cognate investigation conducted in Turkey by Tan (2016). Employing congruent sets of twelve inquiries directed towards internal auditors, coupled

with commensurate data analysis methodologies, I embark on a meticulous examination of the outcomes. (For a more exhaustive compendium of information, refer to Appendix B.)

Question 1: Perception of AIS Contribution

The first question inquired about the perceived contribution of AIS to internal controls and auditing. In both data sets, the majority of participants expressed strong agreement with the notion that AIS play a pivotal role in enhancing internal controls and auditing. The average rating for this question was 4.415 in the Turkish data set and 4.33 in the Bangladeshi data set. This unanimity among respondents in both countries underscores the global recognition of AIS as a vital asset in the realm of internal controls and auditing.

Question 2: Integration of AIS with Other Management Systems

Participants from both data sets concurred that AIS were effectively integrated with other management systems, notably enterprise resource planning (ERP) systems, which are deemed crucial in contemporary management information systems. This consensus reflects the understanding that AIS do not operate in isolation but are integral components of larger organizational frameworks.

Question 3: Efficiency of Event Tracking

Regarding the efficiency of event tracking, the Turkish data set showcased a higher level of agreement, with most participants concurring that AIS efficiently capture and monitor events. However, in the Bangladeshi data set, while participants also agreed on the efficiency of event tracking, a smaller proportion expressed neutrality. This discrepancy may indicate subtle variations in the level of confidence in AIS capabilities in the two countries.

Question 4: Computer-Based Database System

Both data sets emphasized the provision of a computer-based database system by AIS to store and retrieve data. Notably, the Turkish data set demonstrated a stronger level of agreement in this regard. This finding suggests that Turkish respondents may have a more pronounced reliance on AIS for data management compared to their Bangladeshi counterparts.

Question 5: Ensuring Reliable Financial Reporting

Both data sets acknowledged the significance of AIS in ensuring reliable financial reporting, aligning with generally accepted accounting principles (GAAP) and international financial reporting standards (IFRS). Remarkably, the Bangladeshi data set expanded upon this point by mentioning local standards such as Bangladesh Accounting Standards (BAS) and Bangladesh Financial Reporting Standards (BFRS) in addition to IFRS. This divergence highlights the specificity of local contexts and regulations, which may influence the perspectives of internal auditors.

Question 6: Encouraging Efficiency and Effectiveness

Participants in both data sets agreed that AIS encouraged efficient and effective resource utilization, thereby contributing to the control and reliability of financial information. This unanimity underscores the universal acknowledgment of AIS as tools for optimizing organizational processes.

Question 7: Enhancing Compliance with the Law and Standards

Both data sets emphasized that AIS play a pivotal role in enhancing compliance with legal regulations and accounting standards, thereby preventing illegal or fraudulent behavior and ensuring the smooth operation of the system. This alignment suggests that internal auditors in both countries recognize the compliance-enforcing capabilities of AIS.

Question 8: Improving Controls and Security

Both data sets concurred on the idea that AIS improve controls by restricting access to company data, reducing risks for internal auditors, and emphasizing the necessity of robust internal control systems and security authorization. This agreement reinforces the belief that AIS are instrumental in fortifying internal controls and security measures.

Questions 9-11: Organizational Design and Control Structure

Questions 9 to 11 in both data sets found consensus among participants regarding the presence of policies, procedures, organizational designs, and physical barriers that contribute to the control structure of AIS. Additionally, both data sets highlighted the incorporation of preventive and detective controls as integral components of AIS design. These findings emphasize the holistic approach internal auditors take toward control structures in their organizations, considering not only technological aspects but also procedural and organizational dimensions.

Last Question: Raising Awareness and Increasing Budget

In both data sets, the final question yielded similar results, with the majority of participants agreeing that AIS contribute to internal controls by raising awareness and increasing the company's budget, ultimately enhancing the effectiveness of these controls. This consensus underscores the multifaceted impact of AIS on organizations, extending beyond technical aspects to influence financial resources and corporate culture.

Overall Comparative Analysis

In summary, the comparative analysis of the survey results from Turkey and Bangladesh reveals striking similarities in the perspectives of internal auditors regarding the role of AIS in internal controls and auditing. Both data sets consistently highlight the positive impact of AIS on these critical functions. Internal auditors from both countries recognize AIS as integral tools for enhancing internal controls, ensuring compliance with legal and accounting standards, improving efficiency and effectiveness, and fortifying security measures.

Nevertheless, subtle differences also emerge from the analysis. For instance, the Turkish data set demonstrated a slightly higher level of agreement on the efficiency of event tracking and the provision of computer-based database systems by AIS. This could indicate a greater reliance on AIS in the Turkish context for event monitoring and data management.

Furthermore, the Bangladeshi data set provided a more detailed perspective by encompassing local accounting standards (BAS and BFRS) in addition to international ones (IFRS) when discussing the role of AIS in ensuring reliable financial reporting. This highlights the contextual nuances that shape the perceptions of internal auditors in different regions.

This comparative analysis has shed light on the perceptions of internal auditors in Turkey and Bangladesh regarding the role of Accounting Information Systems (AIS) in internal controls and auditing. Despite the cultural and contextual differences between the two countries, internal auditors from both regions overwhelmingly recognize the positive impact of AIS in enhancing internal controls, ensuring compliance, and improving the efficiency of organizational processes.

The findings of this comparative analysis provide valuable insights for organizations operating in diverse cultural and regulatory environments. Understanding the commonalities and differences in the perspectives of internal auditors can inform strategic decisions related to AIS implementation and internal control enhancements. Furthermore, it underscores the importance of considering local nuances and regulations when designing and implementing AIS.

It is worth noting that this analysis is based on data from a specific point in time and may not account for recent developments in the field of AIS or changes in regulatory frameworks. Therefore, ongoing research and continuous monitoring of the role of AIS in internal controls and auditing are essential to stay abreast of evolving practices and regulations in the dynamic world of finance and business.

In conclusion, the comparative analysis presented here serves as a foundation for further exploration of the intricate relationship between AIS, internal controls, and auditing, offering a nuanced perspective from two diverse cultural contexts. As businesses continue to evolve and adapt to new challenges, AIS will remain a cornerstone in ensuring transparency, efficiency, and reliability in financial reporting and internal controls.

Conclusion:

Accounting Information Systems (AIS) play a crucial role within organizations, revolutionizing the way information is captured, processed, stored, and disseminated. A questionnaire survey conducted in Bangladesh aimed to investigate the influence of AIS on internal auditors. And also compare the results with a similar study conducted in Turkey. The findings indicate that the majority of respondents agree that AIS greatly contribute to internal control and auditing. AIS can be seamlessly integrated with other management information systems, such as enterprise resource planning, enabling efficient tracking of events and promoting effective resource utilization. By providing a computer-based database system for data storage and retrieval, AIS facilitate operations and enhance the reliability of financial reporting according to GAAP and IFRS standards. Additionally, AIS aid in compliance with laws and accounting standards, bolster controls by restricting access to company data, and raise awareness about the importance of internal controls, leading to increased budget allocation and successful control implementation. The scope of AIS encompasses policies, procedures, organizational designs, and physical barriers that contribute to the control structure. They incorporate preventive controls to deter errors or irregularities and detective controls to identify such issues after they have occurred. The results demonstrate a positive relationship between AIS and internal auditing, with internal auditors in Bangladesh perceiving AIS as a valuable asset in their work. In addition, the comparison of the findings in Bangladesh and Turkey show that the internal auditors of both the countries share similar perspectives on the positive impact of AIS on internal controls and auditing, their integration with other management systems, their efficiency in event tracking, and their role in ensuring compliance and reliable financial reporting. Hence, this study definitively answers the question regarding the positive impact of AIS on internal auditors in Bangladesh and has similarities with the findings in Turkey. This study is relevant to a wide range of professions, not only internal auditors because it emphasizes the relevance of information technology in the corporate world. However, it should be noted that this study is limited in its focus on internal auditors and future research should explore the impact of AIS on other business groups, including accountants, managers, IT auditors, and others.

References

1. Bae, B., & Ashcroft, P. (2004). Implementation of ERP Systems : Accounting and Auditing Implications. *Information Systems Control Journal*, 5(June), 43–48.
2. Qatawneh, A. M. (2012). The Effect of Electronic Commerce on the Accounting Information System of Jordanian Banks. *International Business Research*, 5(5), 158–163. <https://doi.org/10.5539/ibr.v5n5p158>
3. Sambasivam, Y., & Assefa, K. B. (2013). Evaluating the design of accounting information system and its implementation in Ethiopian manufacturing industries. *Research Journal of Sciences & IT Management*, 2(7), 16–29.
4. Nicolaou, A. I. (2000). A contingency model of perceived effectiveness in accounting information systems: Organizational coordination and control effects. *International Journal of Accounting Information Systems*, 1(2), 91–105. [https://doi.org/10.1016/S1467-0895\(00\)00006-3](https://doi.org/10.1016/S1467-0895(00)00006-3)
5. Boockholdt, J. L. (1999). *Accounting Information Systems: Transactions Processing and Controls*. Irwin/McGraw-Hill. <https://books.google.com.bd/books?id=pbPCQgAACAAJ>
6. Sajady, H., Dastgir, M., & Hashem Nejad, H. (2008). Evaluation of the effectiveness of accounting information systems. *International Journal of Information Science and Management*, 6(2), 49–59.
7. Tan, Ö. F. (2016). Impact of Accounting Information Systems on Internal Auditors in Turkey. *Marmara Üniversitesi Öneri Dergisi*, 12(46), 245–260. <https://doi.org/10.14783/od.v12i46.1000010013>
8. Definition of internal auditors. *The Institute of Internal Auditors*. (<https://www.theiia.org/en/standards/what-are-the-standards/definition-of-internal-audit/>). [23.07.2023]
9. Codes of ethics. *The Institute of Internal Auditors*. (<https://www.theiia.org/en/standards/what-are-the-standards/mandatory-guidance/code-of-ethics/>) [15.11.2015]
10. Neogy, D. (2014). Evaluation of efficiency of accounting information systems: A study on mobile telecommunication companies in Bangladesh. *Global Disclosure of Economics and Business*, 3(1).
11. Mia, L., & Chenhall, R. H. (1994). The usefulness of management accounting systems, functional differentiation and managerial effectiveness. *Accounting, Organizations and Society*, 19(1), 1–13. [https://doi.org/10.1016/0361-3682\(94\)90010-8](https://doi.org/10.1016/0361-3682(94)90010-8)

12. Kim, K. K. (1989). User satisfaction: A synthesis of three different perspectives. *Journal of Information Systems*, 4(1).
13. Mndzebele, N. (2013). The usage of accounting information systems for effective internal controls in the hotels. *International Journal Advanced Computer Technology*, 2(5), 1–3.
14. Alsharayri, M. (2012). Evaluating the performance of accounting information systems in Jordanian private hospitals. *Journal of Social Sciences*, 8(1), 74.

ACKNOWLEDGEMENT

I am grateful to my dear student and research assistant, Sohid, for his his technical expertise, data collection performance and administrative assistance.

Appendix A

Question 1

AIS have contributed to internal controls and auditing					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.3	3.3	3.3
	Dis agree	3	5.0	5.0	8.3
	Neutral	3	5.0	5.0	13.3
	Agree	17	28.3	28.3	41.7
	Strongly Agree	35	58.3	58.3	100.0
	Total	60	100.0	100.0	

Question 2

AIS are integrated with other management information systems					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.3	3.3	3.3
	Neutral	6	10.0	10.0	13.3
	Agree	27	45.0	45.0	58.3
	Strongly Agree	25	41.7	41.7	100.0
	Total	60	100.0	100.0	

Question 3

AIS keep track of all events in an efficient manner

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.7	1.7	1.7
	Disagree	5	8.3	8.3	10.0
	Neutral	11	18.3	18.3	28.3
	Agree	25	41.7	41.7	70.0
	Strongly Agree	18	30.0	30.0	100.0
	Total	60	100.0	100.0	

Question 4

AIS provide a computer-based database system to store and retrieve data					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.3	3.3	3.3
	Disagree	6	10.0	10.0	13.3
	Neutral	9	15.0	15.0	28.3
	Agree	29	48.3	48.3	76.7
	Strongly Agree	14	23.3	23.3	100.0
	Total	60	100.0	100.0	

Question 5

AIS contribute to the reliability of financial reporting i.e., GAAP, IFRS BAS and BFRS					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.0	5.0	5.0
	Disagree	1	1.7	1.7	6.7
	Neutral	7	11.7	11.7	18.3
	Agree	22	36.7	36.7	55.0
	Strongly Agree	27	45.0	45.0	100.0

	Total	60	100.0	100.0	
--	-------	----	-------	-------	--

Question 6

AIS encourage efficient and effective use of resources and operations					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.0	5.0	5.0
	Disagree	4	6.7	6.7	11.7
	Neutral	7	11.7	11.7	23.3
	Agree	30	50.0	50.0	73.3
	Strongly Agree	16	26.7	26.7	100.0
	Total	60	100.0	100.0	

Question 7

AIS enhance compliance with laws and accounting standards					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.7	1.7	1.7
	Disagree	3	5.0	5.0	6.7
	Neutral	10	16.7	16.7	23.3
	Agree	27	45.0	45.0	68.3
	Strongly Agree	19	31.7	31.7	100.0
	Total	60	100.0	100.0	

Question 8

AIS improve controls by limiting access to company data					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.3	3.3	3.3

	Disagree	6	10.0	10.0	13.3
	Neutral	7	11.7	11.7	25.0
	Agree	27	45.0	45.0	70.0
	Strongly Agree	18	30.0	30.0	100.0
	Total	60	100.0	100.0	

Question 9

AIS have policies, procedures, organizational designs, and physical barriers that contribute to the control structure					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	6.7	6.7	6.7
	Disagree	4	6.7	6.7	13.3
	Neutral	9	15.0	15.0	28.3
	Agree	33	55.0	55.0	83.3
	Strongly Agree	10	16.7	16.7	100.0
	Total	60	100.0	100.0	

Question 10

AIS provide preventive controls, which are designed to discourage errors or irregularities					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.3	3.3	3.3
	Disagree	4	6.7	6.7	10.0
	Neutral	9	15.0	15.0	25.0
	Agree	37	61.7	61.7	86.7
	Strongly Agree	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

Question 11

AIS comprise detective controls, which are designed to identify errors or irregularities after they have occurred						
			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree		2	3.3	3.3	3.3
	Disagree		2	3.3	3.3	6.7
	Neutral		8	13.3	13.3	20.0
	Agree		30	50.0	50.0	70.0
	Strongly Agree		18	30.0	30.0	100.0
	Total		60	100.0	100.0	

Question 12

AIS results increase awareness of the need for internal controls, which increases the budget and success						
			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree		3	5.0	5.0	5.0
	Disagree		3	5.0	5.0	10.0
	Neutral		9	15.0	15.0	25.0
	Agree		29	48.3	48.3	73.3
	Strongly Agree		16	26.7	26.7	100.0
	Total		60	100.0	100.0	

Appendix B (Tan, 2016)

Appendix B (Tan, 2016)	Bangladesh	Turkey
AIS have contributed to internal controls and auditing	Average response: 4.33 (indicating strong agreement) Conclusion: Most participants strongly agreed that AIS contributed to internal controls and auditing.	Average response: 4,415 (indicating strong agreement) Conclusion: Most participants strongly agreed that AIS contributed to internal controls and auditing.

<p>AIS are integrated with other management information systems</p>	<p>Participants agreed that AIS were integrated with other management systems, particularly enterprise resource planning (ERP) systems.</p> <p>Conclusion: AIS integration with ERP systems was considered essential as one of the most important management information systems.</p>	<p>Participants agreed that AIS were integrated with other management systems, such as enterprise resource planning (ERP) systems.</p> <p>Conclusion: AIS integration with other management systems, particularly ERP systems, was considered important by the participants.</p>
<p>AIS keep track of all events in an efficient manner</p>	<p>Most participants agreed that AIS efficiently tracked all events, but 11 individuals were neutral about it.</p> <p>Conclusion: While the majority believed in the efficient tracking capabilities of AIS, a small portion remained neutral.</p>	<p>Most participants agreed that AIS efficiently tracked all events.</p> <p>32 participants were neutral about this statement.</p> <p>Conclusion: While the majority agreed with the efficiency of AIS in event tracking, a portion of participants expressed neutrality.</p>
<p>AIS provide a computer-based database system to store and retrieve data</p>	<p>Most participants agreed that AIS provided a computer-based database system for storing and retrieving data.</p> <p>Conclusion: The majority acknowledged the presence of a computer-based database system in AIS, enabling convenient access to information for auditors.</p>	<p>Most participants strongly agreed that AIS provided a computer-based database system for storing and retrieving data.</p> <p>Conclusion: The majority of participants acknowledged the presence of a computer-based database system in AIS.</p>

<p>AIS contribute to the reliability of financial reporting i.e., GAAP, IFRS, BAS and BFRS</p>	<p>Most participants mentioned the benefits of AIS in ensuring reliable financial reporting, adhering to various accounting standards (GAAP, IFRS, BAS, BFRS).</p> <p>Conclusion: AIS were perceived as offering reasonable guarantees for accurate financial statement preparation according to accounting standards.</p>	<p>Participants stated that AIS contributed to the reliability of financial reporting, following generally accepted accounting principles (GAAP) and international financial reporting standards (IFRS).</p> <p>AIS offered a reasonable guarantee that transactions were recorded for financial statement preparation.</p> <p>Conclusion: Participants recognized the benefits of AIS in ensuring reliable financial reporting and adherence to accounting standards.</p>
<p>AIS encourage efficient and effective use of resources and operations</p>	<p>Participants agreed that AIS promoted efficient and effective resource utilization and operational control.</p> <p>Conclusion: AIS were seen as contributing to improved resource management and providing deeper insights into business operations.</p>	<p>Participants agreed that AIS encouraged efficient and effective use of resources and operations.</p> <p>This contributed to control over the reliability of financial information and provided managers with in-depth understanding of business operations.</p> <p>Conclusion: The majority of participants acknowledged the positive impact of AIS on resource utilization and operational control.</p>

<p>AIS enhance compliance with laws and accounting standards</p>	<p>Most participants agreed that AIS improved compliance, preventing illegal or fraudulent behavior and ensuring operational integrity.</p> <p>Conclusion: AIS were perceived as positively impacting compliance with laws and accounting standards.</p>	<p>Participants agreed that AIS enhanced compliance with the law and accounting standards.</p> <p>Compliance helped prevent illegal or fraudulent behavior and ensured an operational system.</p> <p>Conclusion: AIS were seen as supporting compliance efforts and preventing illegal/fraudulent behavior.</p>
<p>AIS improve controls by limiting access to company data</p>	<p>Most participants agreed that restricting access to AIS was essential to improve controls, particularly for internal auditors.</p> <p>Conclusion: Participants acknowledged the need for internal control systems and security authorization to ensure effective auditing</p>	<p>Most participants agreed that AIS should be integrated with other management information systems and that unrestricted access to the system could create risks for internal auditors.</p> <p>Internal control systems and security authorization were necessary for effective auditing.</p> <p>Conclusion: Restricted access to AIS was considered important for improved controls and effective auditing.</p>
<p>AIS have policies, procedures, organizational designs, and physical barriers that contribute to the control structure</p>	<p>Most respondents agreed with the existence of policies, procedures, organizational designs, and physical barriers contributing to the control structure of AIS.</p>	<p>Participants generally agreed with the points raised about AIS control structure, including policies, procedures, organizational designs, and physical barriers.</p>
<p>AIS provide preventive controls, which are designed to discourage errors or irregularities</p>	<p>Conclusion: AIS were recognized as having preventive and detective controls to discourage and identify errors or irregularities</p>	<p>Preventive controls to discourage errors or irregularities and detective controls to identify errors or irregularities</p>

<p>AIS comprise detective controls, which are designed to identify errors or irregularities after they have occurred</p>	<p>ties.</p>	<p>were recognized. Conclusion: The majority of participants acknowledged the presence and importance of control structures in AIS.</p>
<p>AIS results increase awareness of the need for internal controls, which increases the budget and success</p>	<p>Most participants agreed that AIS increased awareness of the need for internal controls, leading to increased budgets but also increased control effectiveness. Conclusion: AIS were seen as raising awareness and enhancing internal controls within organizations.</p>	<p>Most participants agreed that AIS increased awareness of the need for internal controls. It was noted that this increased the company's budget but also improved the success of these controls. Conclusion: Participants recognized that AIS played a role in raising awareness and improving the success of internal controls.</p>