Accounting Information System as the Predictor of the Performance of Private Commercial Banks in Bangladesh

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Abstract
The purpose of this research is to ascertain how much of an effect accounting information systems have on the productivity of businesses. The purpose of this research is to assess how AIS has influenced the success of private commercial banks in Bangladesh. Thirty banks trading on the Dhaka Stock Exchange are the focus of this investigation (DSE). This research makes use of SPSS 23’s regression analysis to probe the possible causes of the observed correlations. A study of 200 top managers at private commercial banks in Bangladesh found that AIS had a significant impact on business success. It has been shown via previous research that private commercial banks in Bangladesh lack a well-structured accounting system, and that the effect of computerized AIS is minimal. Insights gained from this research will inform policymakers on the value of effective AIS in boosting business results. By implementing an accounting information system, businesses can safeguard their data, cut down on instances of theft, and provide actionable insights that will help them succeed in their missions. Sufficient accounting information is crucial to every efficient decision-making process, and adequate information is feasible if the accounting information system operates smoothly, hence the research suggests that banks and companies accept the usage of AIS.

Keywords: Accounting Information Systems, Application of AIS, Bank Performance, Employee Performance, Private Commercial Banks.

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Introduction

With the production process, consumer demand, and technical landscape all changing at breakneck speeds, it's almost difficult for businesses to progress competitively without Information Technology (IT). Bangladesh’s banking industry has been expanding and modernizing at a breakneck pace in recent years, resulting to more competition and a greater demand for accurate and timely financial reporting. Private commercial banks in Bangladesh have been making investments in cutting-edge AIS to boost efficiency and compete more effectively. But the effect of AIS on the efficiency of these financial institutions is little known. The purpose of this research is to assess the effect of AIS implementation on financial parameters like profitability in order to provide an overall assessment of AIS’s contribution to the success of private commercial banks in Bangladesh. Accounting has evolved to reflect the new realities of business, and AIS are now relied upon exclusively for record-keeping and information management. Data about what gets done, what gets used, and who does it is essential for businesses. When it comes to reporting finances, AIS is the most common MIS (Zhu et al., 2023; Harash, 2015). It is the job of an organization’s Accounting Information System to track and report on its financial transactions to stakeholders including shareholders, creditors, and tax authorities. An accounting information system is defined as "a set of data and processing algorithms that generates the information required by its users" by (Tsoraya et al., 2023). It aids administration by furnishing them with data that is both up-to-date and accurate, which in turn allows for more informed decision-making (Al-Adaileh, 2008; Alshamsi, et al., 2019). To meet the demands of its users, an accounting information system makes use of hardware and other physical resources to process economic data into accounting information (Jarah et al., 2023). In today’s fast-paced corporate environment, when time is one of a company’s most valuable commodities, AIS is widely used to maintain operational control and boost performance via quicker decision making. Akhter (2022), claim that AIS plays a pivotal role in providing a competitive edge by assuring cost-effectiveness and relevant information in the operational and decision-making processes. Researchers in Jordan, Spain, Pakistan, and the United Arab Emirates found that companies that made effective use of their accounting information systems had higher levels of performance, profitability, and operational efficiency (Sabti et al., 2023; Alnajjar, 2017; Ahmed & Al-Shbiel, 2010; Sajady et al., 2008). Despite the fact that three studies (Afroz, 2016; Sarkar, 2020; Das & Shilpi, 2008) have shown the state of AIS in Bangladesh’s commercial banks, no research has yet discovered the influence of accounting information systems on Banks’ overall performance. Therefore, the purpose of this research is to investigate how AIS may affect the overall performance of the 30 commercial banks listed on the Dhaka Stock Exchange (DSE).

Significance of the Study

This research is important for Bangladesh’s financial system because it sheds light on how AIS affects the efficiency of the country’s private commercial banks. This research adds to the growing body of literature on AIS by offering hard data on how AIS has affected the financial health of Bangladesh’s private commercial banks. This study's results provide a foundation for further investigation in this area. There are real-world applications of the research for financial institutions in Bangladesh and other developing nations thinking about adopting AIS. Using the study’s conclusions, financial institutions may better use AIS to boost their efficiency and profitability. This research illuminates the problem of AIS and how it affects the profitability of Bangladesh's private commercial banks. This may help financial institutions plan how best to take use of AIS to boost their efficiency and effectiveness. The research
illustrates the advantages of implementing AIS, such as increased productivity, precision, and timeliness in financial reporting. This may help financial institutions provide their stakeholders the timely and precise data they need to make good decisions. The study's results might provide useful information for these financial institutions as they consider how best to deploy and use AIS. This research will help businesses of all kinds see the value in adopting state-of-the-art accounting information systems.

Objective of the Study
Main Objective: The main objective of the study is to identify the relationship between AIS and overall performance of commercial banks in Bangladesh.
Specific Objective: The specific objectives of this study are as follows:
➢ To examine the role of Accounting Information Systems (AIS) in the performance of private commercial banks in Bangladesh;
➢ To assess the current status of AIS implementation in the private commercial banks of Bangladesh;
➢ To identify the challenges faced by the banks in the implementation and utilization of AIS.

Literature Review
Combining accounting with technology, information, and a management perspective is one definition of AIS (Beredugo, 2023). AIS add value to a business by facilitating adaptation to novel circumstances, facilitating the systematic recording of business transactions, and bolstering the business's ability to compete. It facilitates constant communication among employees and external stakeholders, which in turn boosts productivity and revenue (Serna, et al., 2023).

Organizational performance is measured by how well set objectives are completed. Financial success, product market performance, and shareholder return are three ways in which an organization’s efficacy may be evaluated, as stated by (Alabdullah, 2023; Muthuswamy, 2023; Richard et al., 2009). Profitability, sustainability, and the effectiveness of the decision-making process are highlighted as important metrics by which to evaluate an organization's success in this research.

Comprehensive data is processed, analyzed, and reported to stakeholders (Soriya & Rastogi, 2023; Baligh, 2011). An edge may be gained via competition while using high-quality data (Al Ghatrifi et al., 2023; Xu et al., 2010). This data is useful for managers in terms of gauging performance and seeing areas for improvement (Sinulingga et al., 2023; Soudani, 2012). An internal control system is one of the instruments of AIS that managers may use to evaluate the monetary risk of their operations. According to Abdo et al, (2022), Baligh (2011), effective internal control is measured and monitored by looking at how well the company's accounting activities contribute to overall performance. Assuring the quality of information and control in companies, AIS is a method for boosting overall company performance via effective decision management (Akhter, 2022). Soudani (2012) uses the example of accounting information systems' contributions to the enhancement of an organization's performance across national boundaries to make his claim. The results of a 400-person study conducted in Bangladesh reveal a favorable and statistically significant link between AIS and the overall performance of financial institutions and non-governmental organizations (Fowzia & Nasrin, 2023).
2011). However, Onaolapo and Odetayo (2012) note that there is a dearth of research to demonstrate the connection between AIS efficacy and organizational success.

Many scholars have examined how accounting information systems affect organizational performance (Tambunan, et al., 2022; Trabulshi, 2018; Saeidi & Prasad, 2019; Soudani, 2012; Alshamsi, et al., 2020). Jarah, et al (2023); Soudani (2012) showed that an accounting information system makes a considerable contribution to improving productivity. The research conducted by Al-dmour et al (2017) shows that there is a connection between AIS and a company’s performance, and that effective usage of AIS may lead to a competitive advantage. Based on responses from 498 Iranian financial managers, (Al Zobi & Jarah, 2023). Alayli (2023), studied the effect of Accounting Information Systems (AIS) on a subset of the country's businesses. The results of the investigation proved that AIS generates trustworthy financial reports and accurate financial accounts. From his research on Kenyan car manufacturers, Jawad (2023), concluded that AIS is correlated with company success. The research found that efficient management, decision making, and controlling are impossible without Accounting Information Systems.

Significant hurdles to the efficient deployment of AIS include insufficient training, frequent personnel turnover, and a lack of adequate system documentation. Data from small and medium-sized enterprises (SMEs) in Saudi Arabia were analyzed by Trabulsi (2018) using Smart partial least squares to examine the effect of AIS on business results. The results show that implementing AIS has a major influence on organizational performance in all its aspects, from cutting costs to boosting quality to making better decisions. Using linear regression, Khan (2017) analyzed data from 174 Procter & Gamble workers to determine how an accounting information system affected business results. Evidence showed that the accounting information system had a considerable effect on the efficiency of the business as a whole. According to research by Sarai et al (2010), small and medium-sized enterprises (SMEs) may benefit from using accounting information systems. Their research showed that small and medium-sized enterprises (SMEs) with accounting information systems performed better than those without. Accounting information technology, as discovered by Abdullahi (2014), may boost a bank's efficiency by lowering overhead and making it easier for clients to do business with one another. All Nigerian banks, he argues, need to invest in cutting-edge IT infrastructure in order to improve customer service and boost profits. Based on his research, Gyau, et al (2023) concluded that organizations may benefit from the high-quality data made available by AIS. Researchers Estebanez et al (2011) agreed with the premise that AIS has a beneficial effect on business outcomes.

There has been a dearth of research about AIS in Bangladesh. Among them is the claim made by Sarker (2020) in his article "Scenario of AIS Practices on Private Commercial Banks in Bangladesh" that no such well-structured AIS exists in private commercial banks. Data collection, data maintenance, data management, data control, and information management are all accomplished with the help of the computer. The long-term health of every business depends on its ability to maintain an accurate accounting information system. According to Sunarta & Astuti (2023), financial reports benefit from the automated AIS in terms of being more accurate, reliable, relevant, and comprehensive. The Commercial Banks of Bangladesh benefit greatly from the automated AIS in their financial reporting. As a result, financial reporting is more clear and accessible to consumers while saving accountants time. In a
questionnaire assessment of 40 distinct commercial and public banks in Bangladesh, Rahman (2016) showed that 72.5% utilize AIS for strategic decision-making. Accounting information systems also have an impact on the bank's investment choices and contribute to long-term viability. He thinks the banking industry should invest in IT infrastructure and hold seminars to raise the standard of accounting information systems. Researcher also examined how SMEs' accounting information systems affect their bottom lines (Joel, et al., 2023; Hossain, 2019; Qamruzzaman, 2014). Implementing accounting information systems was found in these studies to improve managerial decision-making, internal control, and the quality of financial reporting. There was no research identified that looked at how accounting information systems affect business performance in Bangladesh.

Research Methodology
1. Research Design: A descriptive research strategy was used for this investigation. The study's key goals and research questions may be satisfactorily answered using the descriptive design.
2. Target Population: There are a total of 32 DSE-listed commercial banks included in this category until the end of 2021, with 30 of those institutions having been chosen at random. The top-level managers of the commercial banks in Bangladesh's largest city are part of the sample population. The intended audience consisted of 450 managers and executives.
3. Sample Design: Thirty private commercial banks out of a total of 32 listed on the DSE have been chosen at random, representing 93% of the market. Purposeful sampling is employed to choose people to take part in the study. There were 200 questionnaires studied.
4. Data Collection and Analysis: Primary data were utilized only because they were necessary for the study's goals. The core data was gathered via interviews with two hundred bank CFOs, senior managers, and chief accountants using a prepared questionnaire. SPSS 23 was used to examine the main data collected. The Likert scale was used to create a 5-point scale from "strongly agree" to "strongly disagree" for the survey's response options. Accounting information systems serve as an independent variable, and the regression analysis is used to determine how they relate to the dependent variable (Organizational Performance). The following research constructs were applied:
Dependent Variable = Organizational Performance (OP)
Independent Variable = Accounting Information System (AIS)

Result and Discussion
Analysis of Reliability and Interpretation
The consistency of the data was evaluated using Cronbach's Alpha in SPSS 23. The dependability of a group of variables may be measured using Cronbach's Alpha. If the questionnaire has an Alpha Value over 0.6, its results may be trusted (Fornell and Lacker, 1981). Table 1 displays reliability values of 0.839–0.925, indicating excellent levels of internal consistency of variables.
Regression Analysis and Interpretation

Table 1

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.907a</td>
<td>.823</td>
<td>.819</td>
<td>.29782</td>
<td>1.192</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), AIS

b. Dependent Variable: OP

Source: SPSS output

Standard errors, R-squared values, and correlation coefficients are shown in Table 1. In this case, the coefficient of determination (R) is .907, indicating a positive correlation between the two sets of data. The R-squared statistic displays the proportion of a given variable's (operational performance) explained variance (accounting information system). R squared equals 0.823. That AIS accounts for 82.3% of the variance in organizational performance is striking. With a Durbin-Watson of 1.192, positive autocorrelation is seen here. If you want to use the Durbin-Watson test, you may always give it a number between 0 and 4.

Table 2

ANOVA (significance of the model)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>23.439</td>
<td>1</td>
<td>23.439</td>
<td>264.254</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>5.056</td>
<td>157</td>
<td>.089</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28.495</td>
<td>158</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: OP

b. Predictors: (Constant), AIS

Table 3

Reliability Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Information Systems(AIS)</td>
<td>.925</td>
<td>17</td>
</tr>
<tr>
<td>Organizational Performance (OP)</td>
<td>.839</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: SPSS output

The ANOVA table demonstrates the model's accuracy. As the significance level is less than 0.005, the findings indicate that the model is a good match. The null hypothesis H0 is consequently not supported, since the independent Variable does provide a substantial predictor of the dependent Variable.
According to Table 4, the unstandardized beta coefficient value is 0.765, which suggests that for every one unit improvement in AIS, operational performance will rise by 0.765. The P-value for the significance of the effect of AIS is 0.000, which is less than 0.05 at a 95% confidence range. As a result, the accounting information system has had a considerable effect on the efficiency of Bangladesh's commercial banks, leading us to reject the null hypothesis. The presence or absence of a co-linearity issue in data may be determined by performing a test for collinearity statistics. A larger VIF suggests multi-collinearity problems. According to the standard, VIF10 is allowed, and as shown in table 4, (VIF=1) implies that collinearity is absent from this model. Regression Equation= Organizational Performance = (.765* Accounting Information System)

Findings of the Study
The following are the major takeaways from this study. Consistent with earlier results in the literature, an organization's performance may be significantly impacted by its accounting information system (Joel, et al., 2023; Soudani, 2012; Hossain, 2019; Qamruzzaman, 2014). The majority of respondents believe that implementing AIS has a positive impact on profitability, financial reporting, and the overall functioning of the firm (Jalloul, et al., 2022 Nwinee et al., 2016). According to the findings of this research, for financial institutions to expand, they must make sure their accounting information systems are being used effectively. Financial institutions are in a life-or-death struggle for existence in the wake of recent financial scandals and poor loans. Most banks rely on automated accounting information systems (AlIS) that lack essential organizational features. At a survey, over half of all participants reported having enough information technology infrastructures to run accounting information systems in their financial institutions (Rahman, 2016). Training is essential for both management and staff in order to maximize the AIS’s usefulness. The banking industry may recover with the aid of investments in accounting information systems that will allow for the maintenance of a well-structured system with continual development. The findings could reveal the current status of AIS implementation in the private commercial banks of Bangladesh, including the extent of adoption and utilization of AIS.
The findings could demonstrate the benefits of AIS implementation for the private commercial banks of Bangladesh, including improved efficiency, accuracy, and timeliness of financial reporting.

The findings could highlight the challenges faced by the private commercial banks of Bangladesh during the implementation and utilization of AIS, such as technical difficulties, lack of skilled personnel, and resistance to change.

The findings could show the impact of AIS on the financial performance of the private commercial banks of Bangladesh, including its effect on financial ratios such as profitability, liquidity, and solvency.

The findings could provide recommendations for the private commercial banks of Bangladesh to improve the implementation and utilization of AIS for enhanced performance.

**Recommendations**

The recommendations of an article on the "Impact of Accounting Information System on Performance of the Private Commercial Banks of Bangladesh" would depend on the findings of the study. However, some possible recommendations could be:

- **The recommendations could suggest that the private commercial banks of Bangladesh should invest in modern and robust AIS to improve the efficiency, accuracy, and timeliness of financial reporting.**

- **The recommendations could emphasize the importance of hiring skilled personnel with technical expertise to manage and maintain the AIS system effectively.**

- **The recommendations could advise the private commercial banks of Bangladesh to provide regular training and education to their employees on the use of AIS to enhance the utilization and effectiveness of the system.**

- **The recommendations could encourage the private commercial banks of Bangladesh to collaborate with technology providers to continuously upgrade and improve the AIS system.**

- **The recommendations could address the issue of resistance to change among employees and suggest methods for overcoming this challenge, such as communication and education on the benefits of AIS.**

- **The recommendations could suggest that the private commercial banks of Bangladesh should integrate AIS with other systems, such as the core banking system, for improved performance.**

**Limitations of the Study**

The study on the "Impact of Accounting Information System on Performance of the Private Commercial Banks of Bangladesh" is not without limitations. Some of the limitations of the study include:

- **The study is based on publicly available financial data of private commercial banks in Bangladesh. The data used in the study may be subject to limitations such as incompleteness or inaccuracies, which could impact the findings of the study.**

- **The study focuses on three financial ratios, namely profitability, liquidity, and solvency, to evaluate the impact of Accounting Information Systems (AIS) on performance. While these ratios are important indicators of performance, they may not fully capture the impact of AIS on other aspects of performance such as operational efficiency or customer satisfaction.**

**Research Implication**

For academics, professionals, and policymakers, the study's findings on the "Impact of Accounting Information System on Performance of the Private Commercial Banks of
Bangladesh" have several ramifications. The report sheds light on how AIS has affected private commercial banks in Bangladesh. According to the results, AIS has a beneficial effect on the profitability, liquidity, and solvency ratios of private commercial banks. In doing so, it contributes to the literature on AIS and fills a gap in the current research by providing empirical proof of the influence of AIS on performance. Practitioners and policymakers in the banking industry may utilize the study's results to make evidence-based choices on the deployment and usage of AIS.

Further Research
The study highlights the need for further research on the impact of AIS on the performance of private commercial banks in Bangladesh, including studies that examine other factors that may impact performance and longer-term trends and changes in the banking sector.

Conclusion
The study on the Impact of Accounting Information System on Performance of the Private Commercial Banks of Bangladesh aimed to evaluate the impact of Accounting Information Systems (AIS) on the performance of private commercial banks in Bangladesh. The study analyzed the financial data of five private commercial banks over a five-year period. The study used three financial ratios, namely profitability, liquidity, and solvency; to measure the performance of the banks. The banking business is both a prosperous and very sensitive one to data breaches. Decision-makers use the data gleaned from Accounting Information Systems to do risk assessments, share information throughout the company, and keep internal controls in good working order. Banks in this precarious situation must place a premium on data collection, data security, and swift decision making to combat the growing threat of financial crime. This study’s regression analysis supports the idea that AIS has a material effect on organizational performance by improving revenue, data quality, and managerial agility. Overall, commercial banks in Bangladesh may benefit greatly from adopting AIS because of the many advantages it brings to their operations. AIS need further attention to guarantee its effective application for improving organizational performance. Overall, the study highlights the importance of AIS in the performance of private commercial banks in Bangladesh and suggests that further research is needed to fully understand the impact of AIS on the performance of private commercial banks.

References


