

# Impact of Accounting Information System on Organizational Performance: Private Commercial Banks of Bangladesh.

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**Abstract-** This study aims to determine the impact of accounting information systems on organizational performance. This study analyses the data collected from 30 banks listed under the Dhaka stock exchange (DSE). This paper employs regression analysis using SPSS 23 to investigate causal relationships between the variables. The empirical findings from a survey of 200 experienced employees from senior management of private commercial banks in Bangladesh confirmed a strong relationship between accounting information systems and organizational performance. Previous literature confirmed that there exists no well-structured accounting system and the impact of computerized AIS is not significant in private commercial banks of Bangladesh. This study will help policymakers understand the contribution of efficient AIS to an organization's performance. By using accounting information systems, organizations can protect data, reduce misappropriation of assets, and produce helpful information to achieve organizational goals and objectives, thereby enhancing the company's performance. The study recommends that banks and organizations adopt the use of AIS because adequate accounting information is essential for every effective decision-making process, and adequate information is possible if the accounting information system runs efficiently.

**Index Terms-** Commercial banks, Accounting information systems, organizational performance, adoption of AIS, Bangladesh, Dhaka Stock Exchange (DSE)

## I. INTRODUCTION

As the current business world is evolving due to rapid changes in the manufacturing process, customer demand, and technological advancement, it is almost impossible to achieve competitive advancement without Information Technology (IT). As the nature of business has changed, accounting has also changed, and businesses are now solely dependent on Accounting Information Systems (AIS) for record-keeping and information management. Businesses need to collect data about activities, resources consumed, and the people engaged in these activities. The most used information system is AIS for financial reporting (Harash, 2015). Accounting Information Systems is a system of

identifying, recording, and communicating the financial data of an organization to investors, creditors, and tax authorities. According to Bagranoff et al., (2010), "an accounting information system is a collection of data and processing procedures that creates needed information for its users" (p. 5). It supports management by providing timely, relevant, and accurate information to make better decisions (Al-Adaileh, 2008). An accounting information system employs physical resources and other components to transform economic data into accounting information to satisfy users' needs (Dey, 2007). Most firms use AIS to control a firm's operation and develop its performance by accelerating the decision-making process in this dynamic business world where information is one of the crucial assets. According to Romney and Steinbart (2003), for gaining a competitive advantage to improve the efficiency of operations and decision-making process, AIS plays a significant role by ensuring cost-effectiveness and valuable information. Some researchers have shown that efficient use of the accounting information system increased a firm's performance, profitability, and operations efficiency in Jordan, Spain, Pakistan, and UAE (Ahmed & Al-Shbiel, 2010; Grande et al., 2010; Sajady et al., 2008; Alnajjar, 2017). In Bangladesh, three studies have portrayed the scenario of AIS practices of commercial banks (Afroz, 2016; Sarkar, 2020; Das & Shilpi, 2008) but no studies have found the impact of accounting information systems on Bank's overall performance. So, this study seeks to explore the potential impact of AIS on the overall organizational performance of 30 commercial banks on the Dhaka stock exchange (DSE).

### 1.1 SIGNIFICANCE OF THE STUDY:

This study will be helpful for those banks that are using a computerized accounting system but are not aware of the potential impact of efficient use of it on the overall organization's performance. The outcome of this research has implications for further academic research regarding accounting information systems; for instance, the impact of accounting information systems on the financial performance of banks or NGOs can be investigated. From this study, other organizations from different sectors can understand the benefits of integrating accounting information systems into their operation. Accounting information system influences investment and credit decisions, so ensuring

efficient use of it is crucial for the benefit of the external decision-maker.

### 1.2 OBJECTIVE OF THE STUDY:

The study's objective is to explore the relationship between AIS and overall organizational performance within the context of commercial banks in Bangladesh. According to this objective, the null hypothesis was tested.

H0: There is no significant effect of the accounting information system on the organizational performance of commercial banks in Bangladesh

## II. LITERATURE REVIEW:

AIS can be defined as combining accounting with technology, information, and managerial approach (Gökdeniz, 2005, p. 89). The contribution of AIS in an organization is that it helps to adapt to changing environments, records transactions in a structured way, and ensure competitiveness. It enables continuous information flow to both internal and external parties and helps businesses grow (Grande et al., 2010).

The performance of the organization is assessed through the achieved goals and objectives. According to Richard et al., (2009), organizational performance can be measured through financial performance, product market performance, and shareholder return. This study emphasizes trends of profitability, sustainability, and efficiency of the decision-making process to assess organizational performance.

AIS process comprehensive data, convert it into useful information and communicate it to managers and owners (Baligh, 2011). High-quality information gives a comparative advantage (Xu, 2010). The information helps managers measure performance and identify gaps (Soudani, 2012). For assessing the financial risk of the processes, managers need to develop an internal control system, which is one of the tools of AIS. Baligh (2011) stated that internal control measures and monitors the accounting operations' effectiveness for firm performance. AIS is a tool for improving overall firm performance through effective decision management, ensuring the quality of information and control in organizations (Sajady et al., 2008, p. 50). To illustrate this point, Soudani (2012) argues the role of the accounting information system in improving the organization's performance in different countries. A positive and significant relationship found between AIS and the overall performance of financial institutions and non-governmental organizations in Bangladesh from a survey of 400 people (Fowzia & Nasrin, 2011). Conversely, as stated by Onaolapo and Odetayo (2012), there is a lack of evidence to illustrate the relationship between the effectiveness of AIS and organizational performance.

The relationship between organizational performance and accounting information systems has been studied by many researchers (for example, Trabulshi, 2018; Saeidi & Prasad, 2019, Soudani, 2012). (Soudani, 2012) found that accounting information system significantly contributes to enhancing operational efficiency. The study by Al-dmour, et al., (2017) established that efficient use of AIS is a pathway to getting a competitive advantage, and a correlation is found between AIS and a firm's performance. Salehi et al. (2010) investigated the impact of Accounting Information systems (AIS) in selected industries in Iran from 498 financial managers. The study's

findings showed that AIS leads to correct financial statements and reliable financial reporting. Samuel (2013) found a relationship between AIS and organizational performance from a study on automobile companies in Kenya. According to the study, Accounting Information Systems are essential for organizations' effective management, decision-making, and controlling activities.

Lack of proper training, high staff turnover, and lack of proper system documentation are significant challenges to the effective implementation of AIS. Trabulsi (2018) used Smart partial least squares to analyze the data from SMEs in Saudi Arabia to analyze the impact of AIS on organizational performance. According to the findings, using AIS has a significant impact on organizational performance in all its dimensions, including cost reduction, improving quality, and effective decision making. Khan (2017) collected data from 174 employees of Procter and Gamble and examined the impact of an accounting information system on organizational performance through linear regression. The finding indicated a significant impact of the accounting information system on the company's organizational performance. Sarai et al., (2010) found that the adoption of accounting information systems could help SMEs achieve their objectives. Their study revealed that SMEs that use accounting information systems increase their firm's performance. Abdullahi (2014) found that accounting information technology can improve banks' performance by reducing operational costs and facilitating transactions among customers. According to him, All Nigerian banks should upgrade their information technology for efficient service and profitability. Ismail (2009) found out that high-quality information provided by AIS can be effectively used to enhance organizational performance. Estebanez et al., (2011) also agreed that AIS positively correlates with organizational performance.

In Bangladesh, very few studies were conducted on AIS. Among these, Sarker (2020), in a paper named "Scenario of AIS Practices on Private Commercial Banks in Bangladesh," stated that there is no such well-structured AIS in private commercial banks. The computer is used for data collection, data maintenance, data management, and data control and information management. An accounting information system is essential to any organization's long-run success. Sarker (2018), in his study, shows that the automated AIS increases the accuracy, reliability, relevance, and completeness of financial reports to a sufficient level. Automated AIS has plenty of positive effects on the financial reports of the Commercial Banks of Bangladesh. It increases transparency, reduces time, and makes financial reporting easier for accountants and more understandable and accessible for users. Rahman (2016) conducted a questionnaire survey among 40 different private and public banks in Bangladesh and found that 72.5% use AIS for strategic decision-making. Bank's investment decisions are also influenced by accounting information systems, which help achieve sustainability. According to him, the banking sector needs to develop computer infrastructure and arrange a training sessions to improve accounting information systems' quality. The researcher also analyzed the impact of the Accounting Information System on the Organizational Performance of Small & Medium Enterprises (Hossain, 2019; Qamruzzaman, 2014). These studies found that implementing accounting information systems could lead to better

decision-making by managers, more effective internal control systems, and enhancement of the quality of financial reports. No study was found about the impact of accounting information systems on organizational performance from the perspective of Bangladesh.

III. METHODOLOGY:

**3.1. RESEARCH DESIGN:** The study employed a descriptive research design. The descriptive design is suitable because it adequately addresses the primary objectives and research questions proposed in the study.

**3.2 TARGET POPULATION:** Up to the end of 2021, this group consists of 32 commercial banks listed in DSE; 30 banks were selected randomly. The study population includes the management group from the main branch of commercial banks in Bangladesh. The target population was 450 experienced employees from senior management

**3.3. SAMPLE DESIGN:** Out of 32 listed private commercial banks of the Dhaka Stock Exchange (DSE), 30 banks have been selected randomly (93% of the population). For selecting participants, A purposive sampling technique is used. Two hundred questionnaires were analyzed.

**3.4. DATA COLLECTION AND ANALYSIS:** only primary data were used to meet the purpose of the study. An interview through a structured questionnaire was conducted to collect the primary data from 200 chief financial officers, senior managers, and chief accountants of the banks. Collected primary data were analyzed by using SPSS 23. The questionnaire was prepared by considering Liker's 5 points scale with a choice of strongly agree to disagree strongly. The regression analysis is considered to discover the relationship between the Independent Variable (Accounting Information Systems) and the Dependent Variable (Organizational Performance).

The following research constructs were applied:  
Dependent Variable = Organizational Performance (OP)  
Independent Variable = Accounting Information System (AIS)

IV. RESULT AND DISCUSSION:

**4.1 ANALYSIS OF RELIABILITY AND INTERPRETATION:**

Cronbach's Alpha was used through SPSS 23 to measure the reliability of collected data. Cronbach's Alpha indicates the overall reliability of a set of variables.

Variables	Cronbach's Alpha	N of Items
Accounting Information Systems (AIS)	.925	17
Organizational performance (OP)	.839	13

The Alpha Value greater than 0.6 shows that the questionnaire is reliable (Fornell and Lacker, 1981). As shown in Table 1, reliability values ranged from 0.839 to 0.925 which illustrates a higher level of internal consistency of variables.

**4.2 REGRESSION ANALYSIS AND INTERPRETATION**

**Table 2: Regression Analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin - Watson
1	.907 <sup>a</sup>	.823	.819	.29782	1.192
a. Predictors: (Constant), AIS					
b. Dependent Variable: OP					

(Source: SPSS output)

Table 2 shows the values of correlation, R square, and standard error. R is .907, which means a positive relationship between independent and dependent variables. R square shows the variation in one Variable (operational performance) that is accounted for by another variable (accounting information system). The value of R square is 0.823. It means 82.3% percent variation in organizational performance is explained by AIS. Here, the Durbin-Watson value is 1.192, which indicates a positive auto-correlation. The Durbin-Watson statistic will always accept a value between 0 and 4.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.439	1	23.439	264.254	.000 <sup>b</sup>
	Residual	5.056	157	.089		
	Total	28.495	158			
a. Dependent Variable: OP						
b. Predictors: (Constant), AIS						

(Source: SPSS output)

The ANOVA table shows the goodness of fit of the model. According to the results, the model is a good fit as the significance level is 0.000, which is less than 0.005. It can be said that the independent Variable can significantly predict the dependent Variable, and therefore H0 is rejected.

Table 4: Coefficients										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.889	.173		5.147	.000	.543	1.235		
	AIS	.765	.047	.907	16.256	.000	.670	.859	1.000	1.000

a. Dependent Variable: OP

(Source: SPSS output)

Table 4 shows that the value of unstandardized beta coefficients is 0.765, which means that if AIS increases by one unit, operational performance will increase by 0.765 times. Besides, the impact of AIS is substantial and statistically significant as the P-value is 0.000, which is less than 0.05 at a 95 percent confidence interval. Therefore, the null hypothesis is rejected, representing a significant impact of the accounting information system on the organizational performance of commercial banks in Bangladesh. Collinearity Statistics is tested to determine whether there is any co-linearity problem in data. Higher VIF indicates issues of multi-collinearity. According to the rule, VIF<10 is acceptable, and table 4 indicates (VIF=1), which means no collinearity exists in this model.

Regression Equation= Organizational Performance = (.765\* Accounting Information System)

### 4.3: FINDINGS AND RECOMMENDATION:

The primary insights from this research are as follows. Accounting information system has a significant influence on organizational performance, coinciding with previous findings in the literature (Soudani, 2012; Hossain, 2019; Qamruzzaman, 2014). Most of the respondents agree that using AIS significantly affects profitability, improves the quality of financial reporting, and helps the organization enhance its overall performance (Nwinee et al., 2016). this study interpreted that banks need to ensure the efficient use of accounting information systems to grow in operation. Due to recent financial frauds and bad loans, the banking sector is going through a critical condition and fighting for survival. Most banks use computerized accounting information systems without any well-structured AIS system. In a study, 47.5% of total respondents say they have sufficient IT infrastructure to use accounting information systems in their banks (Rahman, 2016). Management and employees need the training to get the best benefit of the AIS system. Investment in accounting information systems to maintain a well-structured system with continuous improvement can help the banking sector flourish again.

### V. CONCLUSION AND RECOMMENDATIONS:

As a thriving and most vulnerable sector, the banking industry is susceptible to information. Accounting Information Systems tracks transactions, collects raw data, and transforms this data into information Decision-makers use this information to assess risk, communicate through the organization, and maintain an efficient internal control system. In this critical condition, Banks need to emphasize information generation, protection of

data, and efficient decision making to avoid financial fraud. Regression analysis of this study concludes that AIS significantly impacts the organization's performance by contributing to profitability, information quality, and decision-making ability. To conclude, using AIS is one of the significant factors for enhancing the performance of commercial banks in the context of Bangladesh. More concern should be directed towards AIS to ensure its efficient use for attaining better organizational performance.

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