

Effectiveness of Accounting Information System for Organizational Performance in Bangladesh

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ABSTRACT

The purpose of this research is to explore effectiveness of accounting information system (AIS) for organizational performance in Bangladesh. Today's modern technology brought into use the computer, this technology is the application of AIS is the entire of the related components that are working together to collect, store and distribute data for the purpose of planning, control, coordination, analysis and decision making. Hence, influence of AIS on elements of organizational performance such as: financial performance and performance management in Pharmaceutical and Chemical industries is investigated in this quantitative study. Participants were given questionnaires to gauge their perceptions of the AIS involvement in organizational performance. The study sample consisted of 32 Pharmaceutical and Chemical companies under Dhaka Stock Exchange Ltd and the research was conducted 250 employees who work in the Accounting Unit. This study analysed the data using the (SPSS)-25 program, and the results revealed a statistically significant relationship (at the significance level ($\alpha \leq 0.05$) between the AIS represented by FP, FM, and OP. This means that the AIS provide accountants with relevant information have effect on organizational performance to listed companies in Bangladesh.

Keywords: Accounting information system, Financial performance, Performance management, Organizational performance.

I. INTRODUCTION

Companies that run a business need to design in accounting information systems by paying attention to several components. Such as human resources who are able to understand accounting and financial business processes,

financial and accounting procedures, financial data forms used to record all financial activities, accounting software, and hardware that are supported by internet networks and other equipment. Another way, AIS is related with the components are keep together to collect information, raw data or ordinary data and transform them into financial data for the purpose of reporting them to decision makers (Salehi et al., 2010). It will be able to build an accounting information system according to three activities. Firstly, literature documented that accounting could be identified into three components, namely information system, language of business and source of financial information (Wilkinson, 1993: 6-7). Secondly, information is a valuable data processing that provides a basis for making decisions, taking action and fulfilling legal obligation. Finally, system is an integrated entity, where the frame work is focused on a set of objectives (Bhatt, 2001; Thomas and Kleiner, 1995).

Accounting information systems comprise a mixture of principles, practices, and theories associated with accounting, information, and systems. AIS operates based on the established rules, regulations, methods, procedures, and techniques explained in Al-Dalaien & Khan (2018), where the AIS gathers, saves and processes financial and accounting data to provide reports that managers and other stakeholders can use to make business decisions, to assist business management in enhancing performance efficiency (Fidel, 2007). AIS is a computer-based method used by businesses to gather, store, and process accounting and financial data, which is then utilized by internal users to generate reports for various stakeholders, such as creditors, investors, and tax authorities (Amidu et al., 2011). In recent

years, information and communication technology (ICT) has become a key component of effective accounting systems and high organizational performance. ICT has been utilized to improve the truthfulness of accounting data and the performance of organizations (Taiwo, 2016). As a result, the timeliness of accounting information has improved, allowing accountants to generate reports and conduct operations analysis, which provides management with a clear picture of current operations for increasing performance efficiency (Jarrah & Iskandar, 2019). The firm's superior performance is a reflection of effectiveness and efficiency in managing its resources for operational, investment, and financing undertakings (Stankovic et al. 2012),

Therefore, creating good decision by providing accurate information timely is assisted by output of smart accounting system. Building a significant position in the economic is most important to the different stakeholders for making sound decisions and the proper use of accounting information is to help users in making active and capable decisions which is necessary to ensure the success and survival of any organization. In this research study has focused on 32 Pharmaceutical and Chemical industries listed on the Dhaka Stock Exchange (DSE) in Bangladesh. It is of great interest to scrutinize the perceptions of the respondents regarding the effectiveness of accounting information system on organizational performance like financial performance and performance management indicators of firms.

II. STATEMENT OF THE PROBLEM

The progresses in information technology have ultimately led to the introduction of computerized accounting systems in corporate reporting to help produce relevant and faithful representative financial reports for both internal and external users for decision making (Greuning, 2006). The many advantages from the use of these systems have led many to conclude that systems in corporate reporting are the engine of growth in business organizations (Frenzel, 2006). In spite of the benefit of AIS to the manufacturing industry have some problems still left unsolved and new ones have been credited by the use of information itself being a problem such use of information and communication technology (ICT) to keep accounting records. Another problem is the displacement of labour hands in the accounting department and its union implication of low turnover in firms.

III. REVIEW OF LITERATURES

The purpose of an accounting information system is to present accounting information to various parties who need this information, both internal and external parties. In the present study it is assumed that the organizational performance is a function of the financial performance, performance management and the AIS. Fitness will exist in the combination of strategy and AIS that contribute to financial performance.

Accounting information systems are a set of interconnected components that work together to gather information, raw data, or regular data, and transform it into financial data for reporting to decision-makers (Taiwo, 2016; Wongsim & Hongsakon, 2015). Many companies have been using the AIS to automate and unify their corporate activities. Many firms' key motivations for adopting the AIS are to improve their organizational efficiency and competitiveness (Jarrah & Iskandar, 2019). As a result, AIS might provide businesses with the necessary capabilities and resources to achieve corporate goals and objectives while also improving performance efficiency (Ganyam & Ivungu, 2019).

Nowadays, more and more digital and on-line information is utilized in the accounting information systems (Huang, Lee and Wang 1999, Clikeman 1999). The AIS can create a variety of data, including accounting and non-accounting data, to aid management in the management of short-term issues as well as long-term strategic plan (Kurniawati & Saputra, 2019; Issam, 2012; Matovu, 2005; Klinsukhon & Ussahawanitchakit, 2016; Sahawneh et al., 2016; Budiarto, 2014; Odero, 2014). Jarrah & Iskandar (2019) discovered a statistically significant link between AIS features and financial success at the significance level (0.05). According to Bukenya (2014), there is a considerable link between accounting information accuracy and financial performance. According to Sumaryati et al. (2020), the use of an AIS and an internal control system has no impact on the quality of financial statements. The AIS has a good and considerable impact on business performance and environmental performance, according to Susanto & Meiryani (2019). The results by Jarrah & Almatarneh (2021) reveal the relationship between the effect of management qualification as a moderating variable between the accounting information system and perceived performance. According to Ha (2020), the AIS improve the operational performance of small and medium-sized businesses.

Management is engaged with different

types of activities which require good quality and reliable information. Quality information is one of the competitive advantages for an organization. In an accounting information system, the quality of the information provided is imperative to the success of the systems (Hongjiang Xu, 2010). Quality of information generated from AIS is very important for management (Essex and Magal, 1998). Business organizations often use accounting information systems to provide support for management decisions. Support usually includes financial analysis from company accountants.

Therefore, the relationship between AIS and organizational performance would be moderated by the performance management. According to the previous argument we analyze the contingency fit between AIS, performance management and organizational performance using accounting data, decision making and internal control process.

IV. OBJECTIVES OF THE STUDY

The fundamental goal of this study is to assess respondents' perceptions of the effectiveness of accounting information system in various components of organizational performance made by interested stakeholders, with the following specific objectives:

- To explore the current scenario of using accounting information system (AIS) in organizational performance provided by the selected respondents.
- To determine the components of performance in different respondent perceptions about the use of accounting information by the interested stakeholders.
- To identify the problems in generating effectiveness of accounting information system in corporate firms
- To propose suggestions to overcome the identified problems.

V. RESEARCH QUESTION OF THE STUDY

In order to address the research problem, the following questions would be administered:

- i. Are there any relationship between the accounting information system and the organizational performance in manufacturing firms?
- ii. Also, to what extent does the application of accounting information systems impacted on the performance of the Pharmaceutical &

Chemical industries in Bangladesh?

- iii. Finally, what are the effects of using accounting information systems to keep organizational performance in firms?

VI. HYPOTHESIS OF THE STUDY

Taking into consideration the related literatures this research study has formulated and tested the following null hypotheses:

H₁ There is an impact of perceptions among the respondents regarding the use of accounting information in decisions making organizational performance about the different components.

VII. METHODOLOGY OF THE STUDY

The following methodology has been followed in conducting the study.

7.1 SOURCES OF DATA

The study basically used primary data collected through opinion survey to evaluate the use of accounting information system in making organizational performance.

7.2 SOURCES OF PRIMARY DATA

Primary data have been collected through questionnaire survey among the Chief Finance Officer (CFO), General Manager (GM), Deputy General Manager (DGM), Assistant General Manager (AGM) and Senior Executive Officer (SEO) of the selected Manufacturing Pharmaceuticals & Chemicals industries enlisted under the Dhaka Stock Exchange in Bangladesh.

7.3 PREPARATION OF QUESTIONNAIRE

The questionnaire has been prepared based on the relevant literature of the study. Some expert opinion has been taken in preparing the questionnaire. The sample of the study has been selected by taking thirty two Pharmaceuticals & Chemicals manufacturing industries enlisted in the Dhaka Stock Exchange functioning in Bangladesh.

7.4 MEASURES OF VARIABLES

The set of questionnaire has been developed taking into consideration the relevant literatures as well as expert opinions using a five point of Likert model such as Very Satisfied =5, Satisfied=4, slightly General=3, Dissatisfied=2 and Strongly Dissatisfied=1. The questionnaire has been divided into two parts, one part is related with demographical

information of the respondents and another part is consisted of twenty questions which were concerned with the use of accounting information in making organizational performance about the different components.

7.5 DATA COLLECTION

Data has been collected through sending the structured questionnaire to the designated respondents with the used of direct interview method which consists of 32 Pharmaceuticals & Chemicals firms, the conducted 250 employees who work in the Accounting Unit for instance, chartered accountant (CA), cost and management accountant (CMA), chartered secretaries (CS), masters of business administration (MBA) and bachelor of business administration (BBA) of the firms sampled. So there is very low percentage of failure in collecting data.

7.6 TOOLS USED FOR ANALYSIS

Construct validity is typically evaluated by looking at the patterns of correlations of the scale in question with a variety of other measures. Validity is measured in two contexts – first is content validity and second is construct validity. Content validity of our survey was established from the existing literature and adopting constructs validated by other researchers. Reliability analysis is the ability by which the same results can be obtained if I repeat the measure on the same object and under same conditions (Maria Teresa, Nadia Auriat, 2005).

The statistical tool used for measuring reliability based on internal consistency is Cronbach's alpha. The Alpha Value greater than 0.6 it shows that the questionnaire is reliable (Griethuijsen et.al.,2015; Taber, 2018). Furthermore, mean, percentages, standard deviation and t-test were used to determine the effectiveness of the accounting information in long-term organizational performance.

VIII. EXPERIENTIAL RESULTS THE STUDIES

The part of the study will indicate demographic information, descriptive & reliability statistics, correlation matrix and regression analysis of relationship between the dependent variable and independent variables as well as among independent variables together.

8.1 DESCRIPTION THE DEMOGRAPHIC INFORMATION OF THE RESPONDENTS

To examine the data, which was collected through questionnaires different statistical tools, were used. For that purpose, the information gathered was analyzed using the SPSS software version 25.0. According to the results of the demographic questionnaire, the following summary information about the profile of the sample is presented.

TABLE 1 POSITION OF THE RESPONDENT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CFO	52	20.8	20.8	20.8
	GM	66	26.4	26.4	47.2
	DGM	71	28.4	28.4	75.6
	AGM	40	16.0	16.0	91.6
	SEO	21	8.4	8.4	100.0
	Total	250	100.0	100.0	

Analysis of Opinion Survey Statement

Table 1 represents the frequencies and percentages of the demographic variables. In terms of position of the respondent, 20.80.40 percent of the samples were CFO, 26.40 percent were GM,

28.40 percent were DGM, 16.00 percent were AGM, and 8.40 percent were SEO. Thus, this study's respondents were dominated by General Manager (GM) respondents.

TABLE 2 POSITION OF THE EDUCATION LEVEL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CA,	56	22.4	22.4	22.4
	CMA	54	21.6	21.6	44.0
	CS	52	20.8	20.8	64.8
	MBA	56	22.0	22.0	86.8
	BBA	32	13.2	13.2	100.0
	Total	250	100.0	100.0	

Analysis of Opinion Survey Statement

As evident from Table 2, the respondents were also asked to specify their education level. The results showed that, 22.40 percent of the samples were CA, 21.60 percent were CMA, 20.80

percent were CS, 22.00 percent were MBA, and 13.20 percent were BBA. To conclude, the greatest of participants in this study had Masters of Business Administration (MBA).

TABLE 3 JOB EXPERIENCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 4 Years	36	14.4	14.4	14.4
	5-9 Years	44	17.6	17.6	32.0
	10-14 Years	66	26.4	26.4	58.4
	15 -19 Years	58	23.2	23.2	81.6
	Above 20 Years	46	18.4	18.4	100.0
	Total	250	100.0	100.0	

Analysis of Opinion Survey Statement

As a result, Table 3 reveals the respondents were asked to specify their years of professional experience, and the results showed that 14.40 percent of the responses had less than 4 years, 17.60 percent had between 5 to 9 years, 26.40 percent had between 10 to 14 years, 23.20 percent had between 15 to 19 years, and 18.40 percent had more than 20 years job experience. Refer to Tables 1, 2 and 3 which show the respondents' demographic information there was significant difference for respondent, education and experience.

8.2 RELIABILITY AND DESCRIPTIVE STATISTICS

Cronbach's alpha was used to determine the study's reliability. Cronbach's alpha is a measure of internal consistency, or how closely a group of things are related to one another. It is regarded as a scale dependability indicator. In addition, the descriptive function was computed using the covariance matrix method in the descriptive analysis to ensure that all variables were included in the study. A 5-point Likert scale was used to determine the mean and standard deviation of the constructs.

TABLE-4, RELIABILITY AND DESCRIPTIVE STATISTICS

Variables	No. of Items	Cronbach's Alpha	Mean	Std. Deviation
AIS	6	0.793	2.1793	.83042
FP	4	0.989	2.1830	1.15980
PM	5	0.700	2.2528	.82419
OP	5	0.706	2.2064	.78415

Source: Analysis of Opinion Survey Statement

The results of Cronbach Alpha test show that the value of Alpha score was (0.989) for FP, followed by (0.793) for AIS, (0.706) for OP, and (0.700) for PM that confirms this value

is higher than 0.7 which means that the perceptions of the respondent about using accounting information in performing decision making process about the different

components of organizational decisions are reliable. In terms of descriptive statistics also shows that PM had the highest mean (2.252), followed by OP with a mean of (2.206), FP with a mean of (2.183), and AIS with a mean of (2.179)

but the values of standard deviation are poor in this regard that supports the perceptions of the respondent about the using of accounting information in making performance decisions are significant.

8.3 CORRELATION MATRIX

TABLE 5 CORRELATIONS MATRIX

	AIS	FP	PM	OP
AIS	1			
FP	.979**	1		
PM	.987**	.971**	1	
OP	.902**	.899**	.884**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Analysis of Opinion Survey Statement

Apart from validity assessment of the measurement model, we performed a check for multicollinearity among the variables. A correlations' matrix was used for determining the relationship among all the variables. As Table 5 displays, the highest correlation 0.979 existed between accounting information system (AIS) and financial performance (FP) and the lowest correlation 0.884 existed between financial management (FM) and operating performance. In total, these correlations indicate that multicollinearity.

analyze research questions which relates to the effects of multiple regression analysis was utilized to determine the association between the role of the AIS, including the "FP, PM, and OP," pharmaceutical & chemical manufacturing enterprises. Simple linear regression is expanded into multiple regressions. When we wish to anticipate the value of a variable based on the values of two or more other variables, we utilize this method. The dependent variable is the one we use to make predictions about and Independent variables are the factors we utilize to predict the value of the dependent variable . As a result, Table 6 reveals.

8.4 TEST OF HYPOTHESIS

The test of hypothesis seeks to further

TABLE 6 RESULT OF MULTIPLE REGRESSIONS ANALYSIS ON THE RELATIONSHIP BETWEEN THE EFFECTS OF THE AIS INCLUDING "FP, PM, OP

Variables	Beta	t	Sig.	R	R Squar e	"F" value	F" sig	
FP	.309	8.069	.000	.991	.982	4512.472362	.000 ^b	Supported
PM	.616	17.177	.000					Supported
OP	.080	4.081	.000					Supported

a. Dependent Variable: AIS

Source: Analysis of Opinion Survey statement

Table 6 reveals a statistically significant link between the AIS encompassing the "FP, PM, and OP" in manufacturing enterprises at a significance level of (0.05). The "F" value in this case was (4512.472362) and it was statistically significant (0.01). The value of (R) was (0.991), and the value of (R²) was (0.982) with a t value of FP (8.069) ($\alpha \leq 0.00$). The t value for the PM criteria was (17.177) ($\alpha \leq 0.00$). The t value for the

OP criteria was (4.081) ($\alpha \leq 0.00$).

Considering the significant levels of the different components of financing decisions it has been found that the null hypothesis is accepted in all cases which means that there is no significant variation of perceptions among the respondents regarding the use of accounting information in making process about the different partsof

organizational decisions.

IX. CONCLUSION AND RECOMMENDATIONS

An information system is an organized means of collecting, entering, and processing data and storing, managing, controlling, and reporting information so that an organization can achieve its objectives and goals (Romney et al., 1997:18). The object of this study was to empirically analyze the relationship between AIS and organizational performance on listed companies in Pharmaceutical and Chemical in Bangladesh. Also, in this paper effectiveness of accounting information system was observed on financial performance and performance management.

In contemporary years, many organizations have attempted to manage organizational performance using the balanced scorecard methodology where performance is pursued and measured in multiple dimensions such as; financial performance, performance management, social responsibility and employee stewardship which were used in this study to evaluate effectiveness of AIS on organizational performance.

The findings of this study demonstrated a statistically significant link between AIS, FP, FM and OP in pharmaceutical & chemical firms in Bangladesh at the significance level (0.05), where the AIS offer access to essential information. It also provides accurate data and a chance for accountants to improve their work. From overview of the results, measuring research questions based on the opinion of the respondents:

- 1) Accounting information system was found to be the variable that most impacts financial performance. This states us that AIS is the most important factor in firms that are DSE listed in pharmaceutical and chemical firms in Bangladesh.
- 2) It was found that performance management has effect on an organizational performance. This means that performance management is effective in structure an organizational performance.
- 3) Accounting information system was found that an vital factor in structure an organizational performance through collection, storage and processing of financial and accounting data to be estimated by its influences on enhancement of decision- making process, quality of

accounting information, performance evaluation, internal controls and facilitating company's transactions.

Furthermore, the AIS contribute to data integrity. Where this result is in line with several studies, the researchers concluded that the financial performance, performance management and organizational performance of AIS is very important for increasing the performance efficiency of firms. Also, based on the findings, the study recommends that in order to improve quality AIS, firms must employ highly skilled and competent professionals and accountants to generate financial information and have appropriate academic qualifications.

Accounting information is the essential element of decision making process which helps interested stakeholders in making decisions about the different components of performance and the attempt of this research is to know the perceptions of the respondents about the using of accounting information in making organizational decisions. Based on the findings, it is suggested that additional studies be conducted to establish the impact of other elements, such as the legal and regulatory framework, societal participation, and micro and macroeconomic factors, on increasing company performance. Therefore, performance in companies can be improved through the information produced by AIS that is more accurate and detailed for internal and external use, effective organization control and fulfillment of the strategic aims and objectives of the organization.

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