



Scenario of AIS Practices on Private Commercial Banks in Bangladesh: An Exploratory Study

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Abstract: *This study aims to pursue scenario of Accounting Information Systems (AIS) in the private commercial banks in Bangladesh. It focuses on the thoroughness and behavior of AIS practices in the Bangladeshi private commercial banks. The method for collecting data was interviewing key bank personnel with individual questionnaires. An abuzz accounting information system is essential to any organization's long run success. There would be no way to determine how well the organization is performing without a means of monitoring the events that happen. For this reason an attempt has been made in the present paper to assess the AIS practices of the private commercial banks in Bangladesh. To this end, a total of 36 responses were collected on a structured questionnaire from Bangladeshi private commercial banks. In combine, AIS is in the primordial stage i.e., there is no such well structured AIS in the private commercial banks. They use computer usually for working purposes. But the impact of computerized AIS is insignificant. Data collection, data maintenance, data management, data control and information generation is somewhat acceptable. They should give more importance on internal control system, safeguarding of assets and information generation.*

Keywords: *Data Collection, Data Management, Information Generation, Internal Control System, Accounting Information System.*

1. Introduction

Changes and Challenges are very common in our today's life. Our modes of life and ways of thinking are determined by information technology. There are vast opportunities to prolong our intellectual, academic and professional visions. The study of AIS underlines the mechanics and functions of accounting and blends the opportunities in innovative application of IT. Increasing applications of IT make AIS an information system for decision making and control. Modern business organizations must treat information as a valued resource in order to flourish in a vastly changed environment. Information is necessary for making sound decisions and inducing desired action, but those information must be meaningful and useful to persons for whom it is designed (Wilkinson et al., 2000). For meeting these needs, accounting information is needed by firms. The output of AIS is accounting information and is financially oriented.

Accounting is a service function that seeks to provide quantitative information to users (Dalci and Tanis, 2002). Accounting, being a special information system, should pick the real picture of enterprise capital increase, sources of income and added value formation, approaches for revenue and profit distribution, and scope of consumption and storage (Salehi et al., 2010). In today's competitive world, as a key resource in accounting and financial information processing (Salehi et al., 2010), information technology (IT) has become a tool to produce accurate, reliable and timely information through the development of information system (Elpez and Fink, 2006) in both the public and private sectors. For the purpose of satisfying the information needs of a variety of users, an accounting information system employs physical resources and other components to transform economic data into accounting information (Dey, 2007). At present,

accounting systems are closely tied into and may even be fully integrated with other information systems. Once data have been collected, then transformed into information during input, processing and output stages (Romney and Steinbart, 2003). During these three stages, an effective accounting information system performs several key functions, such as- data collection, data maintenance, data management, data control (including security) and information generation. 3 basic principles for an efficient and effective accounting information systems are- cost effectiveness, useful output and flexibility.

It has been found from many studies that banks and other financial institutions are distinguished from other business in the amounts of IT they use. Banking is one of the most information intensive sectors Porter and Millar (1985). Competitive advantage is the most important reason for using IT in the banking sector. The essential source of major information for the organization is the data produced by AIS. The use of AIS has increased remarkably in the banking sector in recent years, because it has contributed to banking operations, reducing cost and time and improving the quality of services delivered to the customers.

2. Literature Review

Definitions of Key Concepts

2.1. Information Technology (IT)

Jimba (1999) has defined information technology as "the various technologies which are used in the creation, acquisition, storage, dissemination, retrieval, manipulation and transmission of information" (p. 80). The UK Department of Industry defined information technology as "the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by a microelectronics-based combination of computing and telecommunication" (Fletcher, 1999, pp. 237-238). This definition echoes that offered by Turban, McLean and Wetherbe (1996), who state that: Information technology in its narrow definition, refers to the technological side of an information system. It includes hardware, databases, software networks, and other devices. As such, it can be viewed as a subsystem of an information system.

2.2. Information System (IS)

A system can be defined as "a group of elements that are integrated with the common purpose of achieving an objective"(Bocij et al, 2006, p. 37). Organizations need information produced by the IS in four activities, which are; decision-making, problem solving, controlling operations and providing new products and services (Laudon and Laudon, 2006). Accordingly, IS has been defined in various ways. For instance, Bocij et al. (2006) defined IS as: "a group of interrelated components that work collectively to carry out input, processing, output, storage and control actions in order to convert data into information products that can be used to support forecasting, planning, control, coordination, decision-making and operational activities in an organisation" (p. 43). Laudon and Laudon, (2005) said that "An IS can be defined technically as set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision- making and control in organisation" (p. 8).

2.3. Accounting Information System (AIS)

According to Bagranoff et at. (2010) an accounting information system can be defined as "an accounting information system is a collection of data and processing procedures that creates needed information for its users" (p. 5). Harrison and Horngren (1992) defined AIS as follows: "An accounting information system often called simply an IS, is the combination of personnel, records, and procedures that a business uses to meet its routine needs for financial data. Because each business has different information demands, each uses a different accounting information system is tailored to the specific needs" (P. 268).

3. Objectives

The overall purpose of this study is to discover the accounting information system practices in Bangladeshi private commercial banks.

To achieve this objective, specific objectives have been set as:

- To know about the system that is followed by the private commercial banks in Bangladesh in their operations.
- To know about the methods of accounting system they follow.
- To be familiar with the satisfaction of the employees about their AIS and problems of AIS.

4. Statement of the Problem

During the last thirty years, financial institutions specifically the banking industry in the least developed country has witnessed an enormous wave of development, which was the direct result of various factors, such as- technological innovation, deregulation and competition. For such kind of economy, financial information of a business organization is very important. The financial institutions should have a unified accounting information system for providing relevant information in timely manner. Different types of tasks are done by effective AIS in the financial institutions such as- data collection, data management, data maintenance, data control and information generation. But the information handling units of the financial institutions are unorganized. Rules and procedures have to develop to lead information handling department. In this situation I try to find out the actual scenario of AIS practices on private commercial banks in Bangladesh.

5. Methodology of the Study

5.1. Research design: This study is an exploratory research and generally exploratory studies are instrumental in finding out what is happening; to seek new insights; to ask questions and to assess phenomenon in a new light (Robson, 2002).

5.2. Sample design: Out of 48 private commercial banks in Sylhet, Bangladesh we randomly selected 36 banks (75% of the population). Respondents were interviewed as per convenience.

5.3. Data collection and analysis: To meet the purpose of the study both primary and secondary data were used. An interview through a structures questionnaire was conducted to collect the primary data from 36 executives of the banks (i.e., one from each of the 36 banks.) and for secondary data various articles, different books, manuals were used. Collected primary data were analyzed by using MS Excel software.

6. Findings and Discussions

Separate Department to maintain AIS

From the study we found that 83.3% of private commercial banks have separate department to maintain AIS. Only 16.7% of private commercial banks did not have separate AIS department.

Table 1: Separate Department to maintain AIS

Separate Department to maintain AIS	Frequency	Percentage
1. Yes	30	83.3%
2. No	6	16.7%
Total	36	100%

Kind of Systems being used for AIS

According to the type of systems in use in AIS, Banks were grouped into three groups: Manual, Computerized/Automated and Mixed. As shown in Table 2, 33.3% of banks are using mixed system, 66.7% are using computerized system for using AIS and there are no banks using manual system in AIS.

Table 2: Kind of Systems are using for AIS

Kind of Systems	Frequency	Percentage
1. Manual	00	00%
2. Computerised/Automated	24	66.7%
3. Mixed	12	33.3%
Total	36	100%

The age of the AIS

Table 3 shows that the age of the AIS, in 23 of the 36 (63.9%) banks for more than 10 years. 8 (22.2%) banks have AIS between 5 and 10 years old. Similarly, 5 banks (13.9%) have AIS less than 5 years old. There is no bank which has not written or specific AIS.

Table 3: Age of AIS

Age of the System	Frequency	Percentage
1. More than 10 years	23	63.9%
2. From 5 to 10 years	8	22.2%
3. Less than 5 years	5	13.9%
4. Has not written or specific AIS	00	00%
Total	36	100%

Software used for AIS

Interviewees were asked to define the software that their banks used for AIS, regarding the following software: Packaged software, Bespoke/in-house developed and Personal computer spreadsheets or databases. As shown in Table 4, 22 banks (61.1%) are using packaged software, 7 banks (19.4%) are using bespoke/in-house developed software and rest of the banks are using Personal computer spreadsheets or databases.

Table 4: Software used for AIS

Type of Software	Frequency	Percentage
1. Package software	22	61.1%
2. Bespoke/in-house developed	7	19.4%
3. Personal computer spreadsheets or databases	7	19.4%
Total	36	100%

Organization Maintaining a Website and Web based transaction

From the observation, we found that all banks have maintained a website but some of them did not maintain web-based transaction. Such as- all private commercial banks have a website but 33 banks have maintained web based transactions.

Table 5: Organization Maintaining a Website and Web based transaction

	Maintaining website			Web based transaction		
	Yes	No	Total	Yes	No	Total
Frequency	36	00	36	33	3	36
Percentage	100%	00%	100%	91.7%	8.3%	100%

Methods of Accounting System

From the study, we found that most of organizations (86.1%, 31 out of 36) like to follow the combination of both accrual and cash basis of accounting.

Table 6: Methods of Accounting System

Methods of Accounting System	Frequency	Percentage
1. Accrual	3	8.3%
2. Cash	2	5.6%
3. Combination of both	31	86.1%
Total	36	100%

Flexible and Cost Beneficial Accounting System

A sound accounting information system must be flexible and cost beneficial as these are the principles of an effective AIS. Flexibility means that the system should be so much flexible that it can be change when necessary and cost beneficial means the benefits of information must outweigh the cost of providing it. Most of the private banks (91.7%) seem that their accounting system is flexible. At the same time 94.4% private banks seem that their accounting system is also cost beneficial.

Table 7: Flexible and Cost Beneficial Accounting System

	Flexible AIS			Cost Beneficial AIS		
	Yes	No	Total	Yes	No	Total
Frequency	33	3	36	34	2	36
Percentage	91.7%	8.3%	100%	94.4%	5.6%	100%

The basic IT used-to run the AIS

According to the basic IT used to run the AIS, as can be seen in Table 8, of the 36 banks, the majority of banks (33.33%) are using mainframe computers with a terminal and minicomputers linked by a local area network. Some banks (52.78%) are using personal computers linked to the network as the hardware implementation of the basic IT. 25 banks (69.44%) is using wide area network linking different sites. 27 banks (75%) were used ATMs for cash provision and 28 banks (77.78%) have electronic funds transfer infrastructure.

Table 8: The basic IT used to run the AIS

The basic IT used to run the AIS	Frequency	Percentage
1. Mainframe computer with terminal	12	33.33%
2. Mini-computers linked by LAN	19	52.78%
3. Stand alone personal computers linked by LAN	5	13.89%
4. Wide area network linking different sites	25	69.44%
5. ATMs for cash dispense	27	75%
6. Electronic Funds Transfer infrastructure	28	77.78%
7. Other technology	00	00%

Business functions or processes undertaken by AIS

Regarding the provision of information, as can be seen in Table 9, 36 banks (100%) presented information in the form of paper reports and displayed information on a computer screen.

Table 9: Form of providing information

Providing Information	Frequency	Percentage
1. Presented in the form of paper report	0	00%
2. Displayed on a computer screen	0	00%
3. Both 1 & 2	36	100%
Total	36	100%

a) In all banks (100%), the AIS has a customer database, a general ledger and a subsidiary ledger, and provides profit and loss reporting and financial statements.

b) Regarding managerial reports, of the 36 banks, 36 banks (100%) produce budgets and performance reports from AIS.

c) Regarding updating of the data stored, banks were grouped into two groups: Real time updating and batch transfer.

Table 10 shows, of the 36 banks, 36 banks (100%) update data using both real time and batch transfer.

Table 10: Updating of the data stored

System of updating data stored	Frequency	Percentage
1. Real Time	0	00%
2. Batch Transfer	0	00%
3. Both 1 & 2	36	100%
Total	36	100%

Satisfaction with bank's internal control system

In this section, interviewees were required to provide information about their overall satisfaction with their banks' internal control system. Table 11 shows that of 36 interviewees, there were 19 interviewees (52.8%) satisfied with their banks' internal control system, 00 (00%) interviewees were fairly unsatisfied, 1 (2.8%) interviewee was completely dissatisfied and 10 interviewees (27.8%) were strongly satisfied.

Table 11: Satisfaction with bank's internal control system

Satisfaction with bank's internal control system	Frequency	Percentage
Strongly Dissatisfied	1	2.8%
Dissatisfied	00	00%
Moderate	6	16.7%
Satisfied	19	52.8%
Strongly Satisfied	10	27.8%
Total	36	100%

Effectiveness of Accounting Information System

The information generation function includes such steps as interpreting, reporting and communication information. An organization's AIS must be able to provide managers with detailed operational information about the organization's performance. 36 banks' (100%) AIS system is effective enough to provide information.

Table 12: Effectiveness of Accounting Information System

Effectiveness bank's AIS	Frequency	Percentage
Yes	36	100%
No	00	00%
Total	36	100%

The priority of data quality issue

Interviewees were asked about the priority of data quality in their AIS. All of them (100%) indicated that the data quality issue is a top priority in their AIS.

Kind of training in AIS

Interviewees were required to provide information about the kind of training they have in AIS. Of the 36 banks, 9 banks (25%) have both initial training for new employees and regular training. On the other hand, 27 banks (75%) undertakes regular training programme in AIS.

Satisfaction with bank's AIS

In this section, interviewees were required to provide information about their overall satisfaction with their banks' AIS. Table 13 shows that of 36 interviewees, there were 26 interviewees (72.2%) satisfied with their banks' AIS and 8 interviewees (22.2%) were completely satisfied.

Table 13: Satisfaction with bank's AIS

Satisfaction with bank's AIS	Frequency	Percentage
Strongly Dissatisfied	00	00%
Dissatisfied	00	00%
Moderate	2	5.6%
Satisfied	26	72.2%
Strongly Satisfied	8	22.2%
Total	36	100%

An executive level to plan and oversee the IS function

As shown in Table 14, all private commercial banks (100%) have an executive level (steering committee) to plan and oversee the IS function. In addition, these committees consist of high - level management level.

Table 14: An executive-level (steering committee)

An executive-level	Frequency	Percentage
There is an executive level	36	100%
There is no an executive level	00	00%
Total	36	100%

7. Conclusion

The accounting information system of the private commercial banks in Bangladesh is in the preliminary stage. A combined system of manual and computerized system is used here. Generally they use computer for operating purposes. But the influence of computerized AIS is not significant. Although they maintain a web-site, but some of them did not maintain web based transaction. Bank employees are satisfied with their internal control system and AIS. They annually prepare financial statements for external reporting and performance evaluation. Majority of them follow combination of cash and accrual basis accounting system. They consider their AIS is cost beneficial and flexible.

Most of the private commercial banks have no unified AIS and they only have partial application of the AIS. So they should improve their overall AIS. They should give more emphasis on internal control system, safeguarding of assets and information generation. Their activities also have lot of lacking in case of external reporting and internal reporting. In comparing with developed world our private banks should more emphasis on web based transaction.

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