



## ROLE OF ACCOUNTING INFORMATION SYSTEM IN STRATEGIC DECISION MAKING: AN EMPIRICAL ANALYSIS OF SELECTED COMPANIES

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### ABSTRACT

*The study examined the impact of Accounting Information System (AIS) on management decision making. The set out objectives are to; identify how accounting information system controls fraud and mismanagement, and determine how effective accounting information system is to decision making. The research was conducted in India. Fifty six manufacturing companies were randomly selected from different sectors of the economy. Data was collected through questionnaire while Chi-square ( $X^2$ ) statistics was used for analytical purpose. It was concluded that the use of AIS enhances decision making in manufacturing companies and that there exist a strong relationship between the use of AIS and managerial efficiency. Furthermore, it was revealed that AIS could be used to control fraud and mismanagement.*

**KEYWORDS:** Accounting Information system, Management Decision Making, Information System, Accounting System.

## INTRODUCTION

For any organization of any type, be it small, medium or large, service or manufacturing, to survive in this dynamic and global world, there is need for proper management of information. Therefore, information is the backbone of any business. However, there is a need for information to be well processed and the means to process information is through an integrated set of component called an information system. Thus, information system is the combination of different components to perform a specific function and basically it can be sourced from both internal and external. According to Elvisa and Erkan (2015), the most important part of management information system is the one that is concerned with data processing, known as Accounting Information System (AIS). AIS involves identifying, recording, analyzing, summarizing and communication of economic information to its end user for decision making.

Decision making has been described as a purposeful choosing from a number of alternative causes of action. AIS provide managers with the necessary information they need. Management decision is one of the most important facets that pervade all organization and constitute its progress and/or failure in actualization of pre-determined goals and objectives (Clinton, Matuszewski & Tidrick, 2011). Interestingly, both financial and non-financial information are used by Management accounting and is generally intended for the use of internal users who use the information to make decisions that help achieve the goals and objectives of the organization. Financial information used by management accountants include sale growth, profits, return on capital employed and market shares, non-financial information include customer satisfaction level, production quality, performance of competing products and customer loyalty. Melissa Bushman (2007) opined that management accountants use both financial and non-financial information to aid business decision-making, in other words, business decision making is predicated on AIS. AIS is a set-up, or system that is primarily concerned with financial data gathering from internal and external sources, analyzing, processing, interpreting and communicating the result (information) for use within the organization so that management can make more effective and efficient plan, decisions and control operations.

Planning, decision making and control operations according to Priyia and Longnathan (2016), are challenges constantly confronted by management in running the affairs of the

organization, especially knowing that resources are relatively scarce and limited. So, the need for good AIS must be made available for proper and accurate decision making. In making a sound decision, the management needs valuable and accurate information from its accountant. The accountant is at the services of the management by providing them with the necessary information they need for decision making. In recent times, it was observed that cases of mismanagement, fraud and irregularities prevail in the organization.

Green Wood and Hinings (2012) opined that there is evidence that reveal the influence of accounting information on decision making process. It emphasizes the importance of a holistic context and which, led to the integration of other institutional influence and multiple logics. The essence of using AIS is to enable managers make wise decision. AIS is also used to setup system of internal control to increase efficiency and prevent fraud in companies. AIS aid in profit making, budgeting and cost control. In a company, it is the duty of the management accountant to see that his company keeps good records and prepare proper financial regulations. Management accountants also need to keep up with the latest development in the use of computers and in computer system design. Accountants provide many special reports for management's decision making. This function requires the gathering of both historical and projected data.

Limited numbers of studies in international management research have focus on the role utilization of AIS play in the holistic context of decision-making strategies, processes and preferences. Based on the above, it was necessary to research on the following research questions; how does AIS control fraud and mismanagement? How effective is AIS in management decision making? Therefore, in order to answer the above questions, the study purposes at examining how effective and efficient management apply AIS in making business decisions. Specifically, the research attempt to; identify how AIS controls fraud and mismanagement and determine how effective, AIS is, to decision making. Furthermore, the hypotheses for the study were stated in null form. They were,

H<sub>0</sub>: Accounting Information System does not control fraud, mismanagement.

H<sub>0</sub>: Accounting Information System does not influence decision making.

## LITERATURE REVIEW

Literature abounds on related topic of interest, some scholarly works that have been done on AIS and organization decision-making are reviewed in this section. Elvisa and Erkan (2015) were of the opinion that role of AIS is crucial in managing an organization in order to implement an effective and efficient internal control system within the organization to achieve organizational goal. According to Wexiodisk, (2006), accounting tools are information provider that guide decisions. They further said, accounting is a measurement and communication system to provide economic and social information about an identifiable entity to permit users to make informed judgments and decisions leading to an optimum allocation of resources and the accomplishment of the organizations objectives. Hafij, Jamil and syeda (2014) affirmed that there is a significant relationship between AIS and strategic decision making. Elvisa and Erkan (2015) concluded that AIS system play a very significant role in the process of decision making, especially today when technology is constantly changing. When the information provided by AIS serves widely the requirements of the system users then AIS system can be said to be effective. However, the question of its efficiency is a different topic entirely. Effective information system ought to systematically provide information that has prospective effects on decision making process.

Generally speaking, accounting information can be classified into two categories namely;

Financial accounting.

Managerial accounting.

**Financial accounting;** Financial accounting include information disseminated to parties that are not part of the enterprises' proper-stockholders, creditors, customers, suppliers, regulatory authorities, financial analysts, and trade associates although the information is also of interest to the company's officers and managers. Such information relates to the financial position, liquidity (that is, ability to convert to cash) and profitability of an enterprise. (Rose: 2004).

**Managerial accounting;** Managerial accounting deals with cost volume profit relationship, efficiency and productivity, planning, control, price decisions, capital budgeting, and

similar matters. This information is not generally disseminated outside the company. Whereas the general-purpose financial statements of financial accounting are assembled to meet basic information needs of most external users, managerial accounting provides a wide variety of specialized report for division managers, department heads, project directors, section supervisors, and other managers (Rose, 2004).

AIS should include aspects such as flexibility and companies' ability to adopt to change. The context of the flexibility does not appear in any of the accounting definition because the definitions were developed during stable periods. The environment has changed and uncertainty has increased.

### **The Concept of Accounting Information System**

AIS may be defined as financial information regarding the economic activities of an organization or unit, to users. Information, made up of what is accepted as accounting today would not have been recognized as such, 50 years ago, changing social attitudes combined with development in information technology, quantitative methods and behavioral sciences has radically affected the environment in which accounting operates today. Priya and longnathan (2016) opined that, there exists a strong relationship between the use of organization's AIS and managerial efficiency, which is as a result of change in information technology.

AIS are financial position statements and other reports supplied by the accountant of an organization, which shows the true and fair financial position of the economic activities of the organization. AIS includes the balance sheet, income statement and cash flow statements.

**Balance Sheet:** This is the statement of financial position that lists the accounting period, it provides a measure of the capital invested by the owners, in a company or business. It is also made up of four main section; fixed asset, current asset, capital and liability. This classification simplifies financial analysis of business.

**Income Statement:** It shows the profitability of the business, it also shows the result of economic activities that took place during the preceding accounting period and profit derivable from such economic activities. It shows the gross profit as well as the net profit of the organization within the accounting period.

**Cash Flow Statement:** is a statement that shows the cash movement in transactions, engaged in by the firm for a particular period, usually one year. The cash flow statement was introduced to replace the fund flow statement in 1998 to make it easier for users of financial statements to relate cash availability and profit, over a given period.

The balance sheet, income statement and cash flow statement together constitute the financial statements of an organization.

Emphatically, all this information need to be compiled by a system before they are made available for users' consumption. The system that made this available is AIS. Management Information System (MIS) provides information which is needed to manage an organization efficiently and effectively. MIS involves three primary resources: people, technology and information system, which are distinct from other information system in that they are used to analyze operational activities in an organization. AIS is characterized by relevance, understandability, reliability, comparability and timeliness of the information provided. Without which the purpose of the system is defeated.

## **METHODOLOGY**

The study was carried out in India. Fifty six manufacturing companies were randomly selected. Data was collected from primary source, data collected via questionnaire and personal interviews was analyzed using simple table with the percentage magnitude or perception of people who subscribed to a particular opinion. The method was adopted due to its relative simplicity and capacity to accommodate large data. Each hypothesis was analyzed using percentage frequency, the chi-square ( $X^2$ ) statistics.

## RESULT AND FINDINGS

**Table 1: Analysis showing if Accounting Information System controls fraud and mismanagement Statistics**

		accav	Mm	Fp
N	Valid	56	56	56
	Missing	0	0	0
Mean		1.1964	2.1964	2.3571
Std. Deviation		.40089	1.06889	1.10254
Skewness		1.571	.981	.842
Std. Error of Skewness		.319	.319	.319

Source: Author's survey (2016)

**Table 2: Accounting Information System availability and importance**

S/N	QUESTIONS	SA	A	UD	D	SD	TOTAL
1	AIS is available	45(80.4)	11(19.6)				56(100)
2	Mismanagement control is aided by AIS	14(25)	28(50)	5(8.9)	7(12.5)	1(1.79)	56(100)
3	The prevention of fraud is owed largely to AIS availability	11(19.6)	27(48.2)	8(14.3)	7(12.5)	3(5.4)	56(100)

The figures in bracket indicate the percentage while figures not in bracket indicate frequency

Source: Author's survey (2016)

Also, 80.4% of the respondents strongly agree that AIS is operational in the organization. 19.6% agree to the question. This indicates that AIS is operational in the organizations. Also, 25.00% of the respondents strongly agreed that mismanagement control is aided by AIS, 50.00% agreed, 8.9% were undecided, 12.50% disagreed and 3.6% strongly disagreed. This indicates that mismanagement control is aided by AIS. Also, 19.6% of the respondents strongly agreed that the prevention of fraud is owed largely to AIS availability, 48.2% agreed, 14.3% were undecided 12.50% disagreed and 5.4% strongly disagreed. This indicates that the prevention of fraud is owed largely to AIS availability.

**Table 3: Chi-Square Tests for Accounting Information System control mismanagement**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.398(a)	4	.000
Likelihood Ratio	48.756	4	.000
Linear-by-Linear Association	38.973	1	.000
N of Valid Cases	56		

A 6 cells (60.0%) have expected count less than 5. The minimum expected count is .39.

Source: Author's computation (2016)

**Table 4: Chi-Square Tests for Accounting Information System aid fraud prevention**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	50.457(a)	4	.000
Likelihood Ratio	49.458	4	.000
Linear-by-Linear Association	37.493	1	.000
N of Valid Cases	56		

A 5 cells (50.0%) have expected count less than 5. The minimum expected count is .59.

Source: Author's computation (2016)

**Golden rule:** The rule state that when the critical p-value is higher than the level of significance, accept the null hypothesis and reject the alternate hypothesis. Since the critical p-value in table 3 and table 4 is 0.000 which is lower than the level of significance 0.05, then the null hypothesis which was that AIS controls fraud and mismanagement is rejected while the alternate hypothesis which was that AIS controls fraud and mismanagement was accepted ( $P = 0.000 < 0.05$ ). It was inferred that AIS controls fraud and mismanagement in the organizations understudy.



**Table 5: Effect Accounting Information System on decision making in manufacturing companies**

S/N	Effects	SA	A	U	D	SD	TOTAL
1	AIS is effective in decision making in manufacturing sector organizations	14 (25.00)	26 (50.00)	5 (8.93)	7 (12.50)	5 (8.93)	56 (100)
2.	AIS reports relevant financial information regarding the economic activities of an organization or unit	20 (35.71)	22 (39.29)	5 (8.93)	7 (12.50)	2 (3.57)	56 (100)
3.	The quality of AIS is relevant to an Organization's performance	31 (55.36)	8 (14.29)	5 (8.93)	11 (1.79)	1 (10.71)	56 (100)
4.	The application of decision making on matters that relate to an organization is made easy by its AIS	36 (69.64)	10 (8.93)	6 (10.71)	2 (3.57)	2 (3.57)	56 (100)
5.	AIS plays a vital role in manufacturing companies	19 (33.93)	21 (37.50)	9 (14.29)	3 (5.36)	4 (7.14)	56 (100)
6.	Manufacturing companies find it difficult to survive without the use of AIS	14 (25.00)	26 (46.43)	5 (8.93)	7 (12.50)	5 (8.93)	56 (100)
7.	AIS is effective in manufacturing companies' decision making	14 (25.00)	28 (50.00)	5 (8.93)	7 (12.50)	2 (3.57)	56 (100)
8.	AIS aids in adequate allocation of resources	45 (80.36)	11 (19.64)				56 (100)

The figures in bracket indicate the percentage while figures not in bracket indicate frequency

Source: Author's survey (2016)

The analysis on Table 5 shows, 25.00% of the respondents strongly agreed that AIS is effective in decision making in manufacturing companies, 50.00% agreed, 8.93% were undecided 12.50% disagreed and 8.93% strongly disagreed. This indicates that AIS is effective in decision making in manufacturing companies. Also, 35.71% of the respondents strongly agreed that AIS reports relevant financial information regarding the economic activities of an organization or unit, 39.29% agreed, 8.93% were undecided, 12.50% disagreed and 3.57% strongly disagreed. This indicates that AIS reports relevant financial information regarding the economic activities of an organization or unit. Also, 55.36% of the respondents strongly agreed that the quality of AIS is relevant to an organization's performance, 14.29% agreed, 8.93% were undecided, 1.79% disagreed and 10.71% strongly disagreed. This indicates that the quality of AIS is relevant to an organization's performance. This finding collaborate with the work of Clinton, Matuszewski & Tidrick, (2011).

Also, 69.64% of the respondents strongly agreed that the application of decision making on matters that relate to an organization is made easy by its AIS, 8.93% agreed, 10.71% were

undecided, 3.57% disagreed and 3.57% strongly disagreed. This indicates that application of decision making on matters that relate to an organization is made easy by its AIS. Also, 33.93% of the respondents strongly agreed that AIS plays a vital role in manufacturing companies, 37.50% agreed, 14.29% were undecided, 5.36% disagreed and 7.14% strongly disagreed. This indicates that AIS plays a vital role in manufacturing companies and this is in line with the findings of Elvisa and Erkan (2015).

Also, 25.00% of the respondents strongly agreed that manufacturing companies find it difficult to survive without the use of AIS, 46.43% agreed, 8.93% were undecided, 12.50% disagreed and 8.93% strongly disagreed. This indicates that manufacturing companies find it difficult to survive without the use of AIS. Also, 25.00% of the respondents strongly agreed that AIS is effective in manufacturing companies' decision making, 50.00% agreed, 8.93% were undecided, 12.50% disagreed and 3.57% strongly disagreed. This indicates that AIS is effective in manufacturing companies' decision making. Also, 80.36% of the respondents strongly agreed that AIS aids in adequate allocation of resources, 19.64% agreed. This indicates that AIS aids in adequate allocation of resources.

**Table 6: Chi-Square Tests for Accounting Information System Influence on Management Decision Making**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	49.398(9)	4	.000
Likelihood Ratio	48.756	4	.000
Linear-by-Linear Association	39.973	1	.000
N of Valid Cases	56		

A 6 cells (60.0%) have expected count less than 5. The minimum expected count is .39.

Source: Author's computation (2016)

Since the critical p-value in table 6 is 0.000 which is lower than the level of significance 0.05, then the null hypothesis which was that AIS does not influence management decision making is rejected while the alternate hypothesis which was that AIS influence

management decision making is accepted ( $P = 0.000 < 0.05$ ). It was inferred that AIS is effective in decision making in manufacturing companies. This finding is in line with the work of Melissa Bushman (2007) which opined that organizations use both financial and non-financial information to aid business decision-making.

## **DISCUSSION**

Results of the study revealed that the use of AIS improves decision making in manufacturing companies which is in line with Wexiodisk (2006) that AIS guides decision making. It can then be conveniently concluded that there exist a strong relationship between the use of organizations' AIS and managerial efficiency which collaborate Longnathan (2016) that there exist strong relationship between AIS and management decision making. There is also a high level of awareness pertaining to the role of AIS. This awareness is not limited to senior and management staff alone but also cut across intermediate and junior staff whose operations are also governed by the AIS. It is evident that the AIS factor looms large among factors, which contribute to the overall corporate efficiency.

From the results of the findings the following emerged: AIS could be used to control fraud and mismanagement, without AIS decision made will be of less quality. Manufacturing companies rely heavily on AIS for decision making. AIS is effective in decision making in manufacturing companies, this conformed to Elvissa and Erkan (2015), although the study introduced fraud prevention.

## **CONCLUSION**

The study revealed that AIS performs a crucial role on management decisions and organization performances, which has been shown to be a major force in decision making. This is achieved by implementing the best fundamental concept of accounting suitable for each company. The selected companies used as case study made the researcher to understand that, for any company to be successful it should endeavor to make use of AIS, because accounting itself is a language of business, and before venturing into any business,

one must understand the language of such business, so as to know the right method to achieve the stated goals and objectives.

Studies have shown that successful utilization of AIS requires a fit between three factors. First, a fit must be achieved with dominant view in the origination or perception of the situation. Second, the accounting system must fit when problems are normally solved, i.e. the technology of the organization. Finally, the AIS must fit with the culture i.e. the norms and value system that characterizes the organization.

## **RECOMMENDATIONS**

Efforts should be made to measure the effects of currently employed accounting concept on management decision making, Apart from employing qualified accountants to handle the processing of management accounting information, management should from time to time conduct an in-service training for accountants to enhance their activities that is supplying accurate information for management use. Managers should have elementary knowledge of accounting generally to enable them understand the information for quick use. They should be trained from time to time on how to apply AIS to decision making.

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