

The Effectiveness and Efficiency of Management Information System (MIS) in Financial Management in Business Enterprises

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Abstract

This study aimed at studying the impact of the MIS on financial management, as well as analyzing the effectiveness and efficiency of the MIS in financial management in business organizations. The study was performed in more than forty manufacturing companies in four districts, namely Pune, Aurangabad, Jalgaon and Dhulia in India. Companies' managers were selected to expose their views to describe the awareness of the MIS and its impact on financial management. Quantitative method was the appropriate technique for this study and the questionnaires were employed for data collection. Furthermore, data was statistically analyzed using MANOVA and Univariate ANOVA test. Based on the study findings that reveal the necessity of implementing the MIS to manage the financial transactions, it was recommended that companies should take data entries of financial management into consideration while developing the MIS and several reports should be generated to provide adequate information for effective decision making. This study will assist financial managers in running business effectively in organizations.

Keywords: Decision Making, Financial Management (FM), Management Information System (MIS)

1. Introduction and Background

The ability of the MIS in financial management is to analyze and accumulate financial data for making right managerial decisions in concern with financial issues. It helps business organizations in meeting the obligations at minimum cost. The MIS provides different reports such as statutory reports, information updates, operation updates, decision analysis and action reports. These reports assist financial managers in running business effectively and efficiently. It can be defined as "components of people, procedure, hardware and software interacting with each other to provide information for decision making"¹. FM is an important function in business organizations. To achieve all functional objectives

managers must understand all complex factors in the financial area. This function is normally associated with the top managers. Managers have to estimate the capital requirements and manage the marginal cost to be equal to marginal revenue to achieve the profitability. The objective of financial management is to ensure that all reports and returns are submitted to shareholders and government to meet the goals and objectives in financial department in a particular company. There are some techniques that can be implemented while running the business like break even analysis, cost analysis, ration analysis, financial model and others. Several decisions should be made by managers regarding financial issues, these decisions are:

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- Capital budgeting decisions that is related to long term assets
- Policy decisions that are related to profits
- Current asset decisions to manage investment
- Funds decisions to meet investment goals.

1.1 Financial Management Information System (FMIS)

The FMIS is a sub-system that can be integrated with other information systems. It provides financial information to managers to support the decision making process of financial function. It also provides information regarding funds investment. The FMIS supplies managers with accuracy of reports and decision making procedure. It facilitates the administration work for employee benefits and enhances schedules and forecasting capacity. The ability to integrate all financial resources to speed the financial process via FMIS makes managers handle all activities effectively in financial management. FMIS includes several elements and every element has its own function. Those elements can be presented as modules or sub-sub-systems. They are general ledger, budgeting accounting, accounts payable and accounts receivable. Transactional data includes credit applications, billing, payment, journal, ledger entries and others. The data of financial intelligence is collected from banks, the stock market, government and other1. Data can also be gathered from payments that are handed to suppliers and other financial institutions. Receipts from customers and employees can be an effective input to the financial management system. Figure1 illustrates FMIS model.

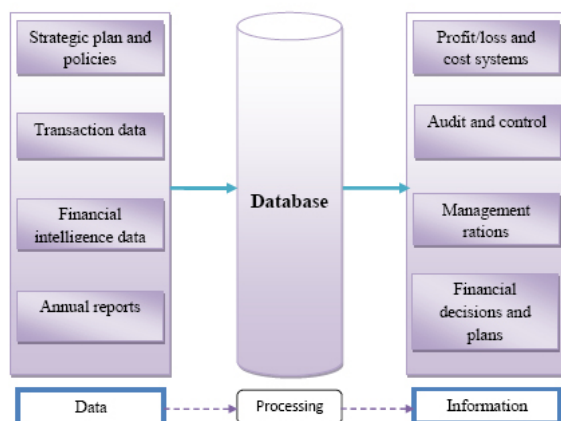


Figure 1. FMIS (model).

2. Objective of the Study

1. To study whether business enterprises practise the MIS to manage financial activities.
2. To study the impact of the MIS on financial management in business enterprises.
3. To analyze the effectiveness and efficiency of the MIS in financial management.

3. Hypothesis of the Study

To provide solution to this research paper, the hypotheses that formulated are:

H_0 : The MIS has no positive impact on effectiveness and efficiency of financial management in business enterprises.

H_1 : The MIS has a positive impact on effectiveness and efficiency of financial management in business enterprises.

4. Research Questions

1. Does the MIS provide advanced financial reports and decision making procedures?
2. Does the MIS enhance scheduling and forecasting capacity?
3. Does the MIS provide a framework for integrating functional processes and financial resources for better business?

5. Review of Literature

In the book of Management Information Systems, Managerial Perspective², financial information system has been described as a sub-system of management information systems in organizations. It supports the decision making process regarding the financial functions. The fundamental financial decisions that managers could make are capital budgeting decision, financing decision, dividend decision, and current asset management. Financial information systems have the ability to improve the speed and accuracy of reports and right information to financial managers to make effective decisions. FMIS involves collecting and analyzing financial data which is used in running a business in a way as wanted as well as in making good financial decisions. There are many benefits of implementing the financial management information systems in an organization. If designed, developed

and implemented in an effective manner, the financial management information system aids greatly in preparing auditable financial reports, making policies, while it supports in preparing various management reports. The MIS provides business organization with a framework for integrating functional processes and financial resources. In Management Information System book, Text and Cases³ the author revealed that the accounting system is the major application in financial management. It has the ability to manage the account transactions in manufacturing companies and provides advance financial reports to managers. Many companies are structured based on financial function because of its importance to company goals. Systems account manages and controls all the transactions that have an effect in the company. These transactions can be in sales, purchase, salary, expenses, budget, customer duty and other. The accounting system facilitates all financial transactions by providing information to meet the needs of all the functions in the company. The query applications reveal the debit and credit balance and show the details of the main account, subsidiary, location and documents. In financial management, analysis of the current financial issues is important to support the decision making process and select investment alternatives. Planning is a very important function in running the business effectively in manufacturing companies. In the MIS the control applications are required in the financial department to manage the account receivable, shortage of funds and advances to creditors. In financial management realizing the impact of control applications requires long time because it is associated with failure of some activities. The most important required reports by the top management are financial reports which can be generated by the FMIS. To manage information managers also place more focus on the financial information system because it can be linked to other functions and that helps managers to make judicious decisions.

6. Research Design and Methodology

This study reveals the effectiveness and efficiency of the MIS in finance management in business organizations. **Quantitative method** was the appropriate technique for this study, the questionnaire was fully involved to collect the required data and it was sent to participants that were randomly selected. The responses were affirmative to fulfil the purpose of the study. **The questionnaire** was distrib-

uted to managers in different companies to expose the impact of the MIS on financial management. **The population** of this study consists of managers of more than forty manufacturing companies in four districts, namely Pune, Aurangabad, Jalgaon and Dhulia in India. These companies were further divided into three groups based on turnover to identify the actual awareness of the impact of the MIS on finance management among companies (1= more than \$1,000,000, 2=\$500,000 - \$1,000,000, 3=less than \$500,000). In obtaining the **sample size** of the population, managers were selected to response. **22 respondents** in the companies that have a turnover of more than \$1,000,000, **22 respondents** in the companies that have a turnover of \$500,000 - \$1,000,000 and **23 respondents** in the companies that have a turnover of less than \$500,000.

7. Data Presentation and Analysis

The responses from the questionnaires are presented in the following tables and subsequently analyzed. They were further asked to comment on three statement regarding the impact of the MIS on finance management using the options (5= very effective and efficient , 4= effective and efficient , 3= moderately effective and efficient, 2= less effective and efficient , 1= least effective , 0= don't know). The statements are:

1. The MIS provides advanced financial reports and decision making procedures.
2. The MIS enhances scheduling and forecasting capacity.
3. The MIS provides a framework for integrating functional processes and financial resources for better business.

Table1 illustrates that, in the companies that have a turnover of more than \$1,000,000, 59.1% of the respondents said that the degree of the MIS in providing advanced financial reports and decision making procedures is somewhat effective and efficient and 31.8% of the respondents have a similar opinion. Similarly in the companies that have a turnover of \$500,000 - \$1,000,000, 68.2% of the respondents believe that the MIS effectively and efficiently provides advanced financial reports and decision making procedures. On the other hand in the companies that have a turnover of Less than \$500,000, 43.5% of the respondents stated at 'Do not know' level while 47.8% stated at 'somewhat effective and efficient'

Table 1. The MIS and advanced financial reports.

The MIS provides advanced financial reports and decision making procedures.						
Turnover			Frequency	Percent	Valid Percent	Cumulative Percent
more than \$1,000,000	Valid	Moderate effective and efficient	2	9.1	9.1	9.1
		Somewhat effective and efficient	13	59.1	59.1	68.2
		Very effective and efficient	7	31.8	31.8	100.0
		Total	22	100.0	100.0	
\$500,000 - \$1,000,000	Valid	Don't know	4	18.2	18.2	18.2
		Moderate effective and efficient	2	9.1	9.1	27.3
		Somewhat effective and efficient	15	68.2	68.2	95.5
		Very effective and efficient	1	4.5	4.5	100.0
		Total	22	100.0	100.0	
Less than \$500,000	Valid	Don't know	10	43.5	43.5	43.5
		Somewhat effective and efficient	11	47.8	47.8	91.3
		Very effective and efficient	2	8.7	8.7	100.0
		Total	23	100.0	100.0	

Table 2. The MIS and forecasting capacity

The MIS enhances scheduling and forecasting capacity.						
Turnover			Frequency	Percent	Valid Percent	Cumulative Percent
more than \$1,000,000	Valid	Moderate effective and efficient	8	36.4	36.4	36.4
		Somewhat effective and efficient	8	36.4	36.4	72.7
		Very effective and efficient	6	27.3	27.3	100.0
		Total	22	100.0	100.0	
\$500,000 - \$1,000,000	Valid	Don't know	3	13.6	13.6	13.6
		Moderate effective and efficient	2	9.1	9.1	22.7
		Somewhat effective and efficient	16	72.7	72.7	95.5
		Very effective and efficient	1	4.5	4.5	100.0
		Total	22	100.0	100.0	
Less than \$500,000	Valid	Don't know	9	39.1	39.1	39.1
		Moderate effective and efficient	2	8.7	8.7	47.8
		Somewhat effective and efficient	10	43.5	43.5	91.3
		Very effective and efficient	2	8.7	8.7	100.0
		Total	23	100.0	100.0	

the fact that the MIS provides advanced financial reports and decision making procedures.

Table2 shows that, in the companies that have a turnover of more than \$1,000,000, 36.4% of the respondents said that the MIS enhances scheduling and forecasting capacity effectively and efficiently while 36.4% of the respondents stated at 'Moderate' level. However, in the companies that have a turnover of \$500,000 -

\$1,000,000, 72.7% of the respondents said that the MIS enhances scheduling and forecasting capacity effectively and efficiently. In contrast to the companies that have a turnover of less than \$500,000, 43.5% of the respondents' feedbacks were positive, indicating that the MIS enhances scheduling and forecasting capacity effectively and efficiently while 39.1% of the respondents did not know.

Table 3. the MIS and financial resources

The MIS provides a framework for integrating functional processes and financial resources for better business.						
Turnover		Frequency	Percent	Valid Percent	Cumulative Percent	
more than \$1,000,000	Valid	Don't know	2	9.1	9.1	9.1
		Moderate effective and efficient	6	27.3	27.3	36.4
		Somewhat effective and efficient	6	27.3	27.3	63.6
		Very effective and efficient	8	36.4	36.4	100.0
		Total	22	100.0	100.0	
\$500,000 - \$1,000,000	Valid	Don't know	3	13.6	13.6	13.6
		Moderate effective and efficient	2	9.1	9.1	22.7
		Somewhat effective and efficient	16	72.7	72.7	95.5
		Very effective and efficient	1	4.5	4.5	100.0
		Total	22	100.0	100.0	
Less than \$500,000	Valid	Don't know	9	39.1	39.1	39.1
		Moderate effective and efficient	2	8.7	8.7	47.8
		Somewhat effective and efficient	11	47.8	47.8	95.7
		Very effective and efficient	1	4.3	4.3	100.0
		Total	23	100.0	100.0	

From table 3, it is clear that in the companies that have a turnover of more than \$1,000,000, 36.4% of the respondents stated at 'very effective and efficient' the fact that the MIS provides framework for integrating functional processes and financial resources for better business and 27.3% of the respondents are in a similar opinion while 27.3% of the respondents stated at 'Moderate' level. In comparison to the companies that have a turnover of \$500,000 - \$1,000,000, 72.7% of the respondents believe that the MIS effectively and efficiently provides a framework for integrating functional process and financial resources for better business. However, in the companies that have a turnover of less than \$500,000 47.8% of the respondents stated at 'Somewhat effective and efficient' level, the fact that the MIS provides a framework for integrating functional process and financial resources for better business while 39.1% of the respondents stated at 'Do not know' level.

8. Test of Hypothesis

Purpose: To study the impact of the MIS on finance management.

Table 4. Between-Subjects Factors

The question	No	Value Label	N
Is MIS used in the company to manage financial activities?	0	Do not practise	20
	1	Practise	47

Table 5. Descriptive Statistics

Business functions	Is the MIS used in the company?	Mean	Std. Deviation	N
Financial Management	Do not practise	1.8667	1.94786	20
	Practise	3.9787	.59953	47
	Total	3.3483	1.51361	67

Table 6. Bartlett's Test of Sphericity

Likelihood Ratio	.000
Approx. Chi-Square	316.268
Df	14
Sig.	.000

Statistical test: MANOVA test was used to study different variables and financial management is one of them; hence the focus will be only on financial management

Table 7. Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig
MIS practice Status	Financial Management	62.584	1	62.584	45.902	.000
Error	Financial Management	88.623	65	1.363		

Variables and measurements:

Independent variable: The MIS status in the companies (1= practicing the MIS to manage financial activities, 2= Not practicing the MIS to manage financial activities)

Dependent Variables (table 4): five business functions but the authors have given focus to financial function in the companies as it shows in the table 5.

In table 6 the Bartlett's Test of Sphericity was conducted to test the sufficient correlation between the dependent variables. Hence it is statistically significant, (P value is less than 0.001) indicating sufficient correlation between dependent variables to proceed with the analysis. Since this study concentrates on finance management which represents one variable among the others, it can be tested separately using Univariate ANOVA as it shows in table 7.

MIS and Finance Management: From Tests of the Between-Subjects Effects table (7), it can be interpreted that the MIS has an impact on financial management [$f(1.65) = 45.902, P=0.000$]. From the descriptive table, it can be seen that for financial management, MIS practice has a mean of 3.9787 while the mean for do not practice is 1.8667. Since P value is less than 0.05, the null hypothesis is rejected. Therefore it can be concluded that the MIS has a positive impact on effectiveness and efficiency of financial management.

9. The Study Findings

According to the primary data that has been analyzed as well as observations, the empirical findings can be summarized as follow:

1. According to the survey study that was conducted in companies, it was observed that, financial management is the most important function along with production management; hence financial managers take the MIS reports and applications into consideration.
2. A Majority of the respondents in the companies believe that the MIS is effective and efficient tool in providing advanced financial reports and decision making procedure for running the business.
3. A very important proportion of the respondents in the companies that have a small turnover do not know whether the MIS has the ability in providing advanced reports to financial managers. This was presented by 43.5% of the respondents in the companies that have a turnover of less than \$500,000 and 18.2 in the companies that have a turnover of \$500,000-\$1,000,000.
4. Concerning the scheduling enhancement and forecasting capacity, it was found that a majority of the respondents in the companies that have a large turnover stated at 'Effective and Efficient' level the fact that the MIS enhances scheduling and forecasting capacity in regarding the financial activities in organizations.
5. 39.% of the respondents in the companies that have a small turnover, stated at 'Do not know' level, in concern with the ability of the MIS in enhancing scheduling and forecasting capacity in financial management.
6. Concerning the integration of functional processes and financial resources, it was found that the MIS is effectively and efficiently provides a framework for integrating functional processes and financial resources for better business according to the feedback of the most respondents in the companies that have a large turnover. On the other hand a significant number of the respondents did not know. Illustrating 39.1% in the companies that have a turnover of less than \$500,000, 13.6% in the companies with a turnover of \$500,000-\$1,000,000 and 9.1% in the companies that have a turnover of more than \$1,000,000.
7. For analyzing the companies that utilize the MIS to handle activities in financial management, it was found that a majority of the companies practise the MIS in financial management with a Mean Rank of 3.97. However there are some companies still not practise the MIS for managing financial activities with a Mean Rank of 1.866.

8. Furthermore, it was observed that, FMIS does not generate all financial reports that are required for running the transactions in financial management, even in large enterprises or in companies that have large turnovers. However to manage and achieve financial goals in organizations, FMIS can be implemented and this study exposes the impact of Management Information System on financial management in business organizations.

10. Conclusion and Recommendations

This study has given endeavor to reveal the effectiveness and efficiency of the MIS on financial management in business enterprises. From more than forty companies, managers were chosen to provide their views in concern with the impact of the MIS on financial management to run business effectively. Most of respondents' feedback were affirmative the fact that the MIS has a positive impact on financial management. On the other hand there is a significant proportion of the respondents who do not know whether the MIS helps managers in handling financial operations effectively and efficiently. Hence, it can be concluded that a majority of the companies practise the MIS to increase the effectiveness and efficacy of financial management. This result pointed out, most of managers in the companies accept as true that the MIS effectively and efficiently provides financial reports and decision making procedures to help managers in making effective decisions. It also indicates that the MIS enhances scheduling and forecasting capacity to run business and that can help companies in achieving competitive advantage. The MIS also provides a framework for integrating functional processes and financial resources for better and fast

access to the required data and information and that will help managers in making the right decisions at the right time. Based on this study, it is highly recommended to these companies who are not responsive to the impact of the MIS on financial management to take FMIS into consideration to manage the financial transactions properly. Generally, it is suggested to the companies where the FMIS is implemented to study all financial processes and resources methodologically along with designing the MIS. The data entries that should be considered while designing FMIS are all types of payments that are made to others, all receipts that are acquired from others and data from stock exchange. Several reports FMIS should generate to facilitate decisions and activities in financial management, these reports are supposed to show monthly trail balance, accounts receivable, accounts payable, expenses, cash position, payment, break even analysis for cost and price decisions, return on investment analysis. Therefore the FMIS can be more effective and efficient when it has the ability to provide and generate the needed reports in financial management to help financial managers in directing investment activities and develop strategies to meet the financial goals in a particular organization.

11. References

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