

## IMPACT OF INFORMATION MANAGEMENT SYSTEM ON DECISION MAKING IN COMMERCIAL BANKS

*alpha were used to verify the instrument's validity and reliability. The suggested hypotheses were tested using correlation and multiple regression analysis. The results*

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### **ABSTRACT**

*The effectiveness of information systems in commercial banks is examined in this study in relation to information quality, timeliness, and reliability. A standardized questionnaire based on a five-point Likert scale was used to gather data from 120 commercial bank workers using a quantitative research approach. Descriptive analysis and Cronbach's*

*show that information system efficacy is significantly and favourably impacted by information quality, timeliness, and reliability, with reliability appearing as the best predictor. By presenting empirical data from a developing economy's banking industry and offering useful suggestions for bank management to improve system efficacy, the paper adds to the body of knowledge on MIS.*

**Keywords:** Management Information System, Information Quality, Timeliness, Reliability, Information System Effectiveness, Banking Sector

### **INTRODUCTION**

Management Information Systems (MIS) are essential for improving organizational efficacy and efficiency in today's technologically advanced and competitive business environment. This is especially true in the banking industry, where risk management, operational effectiveness, and strategic decision making all depend on timely, accurate, and trustworthy information. Banks are depending more and more on information systems to process massive amounts of data and transform it into useful information for management.

Due to problems with information quality, information availability delays, and system unreliability, many organizations are unable to reap the anticipated benefits from large investments in information systems. As a result, comprehending the primary factors that influence the efficacy of information systems has emerged as a crucial field of study. The three crucial aspects of MIS information quality, timeliness, and dependability are the subject of this study, which also looks at how these aspects affect the efficacy of commercial banks' information systems.

### **LITERATURE REVIEW**

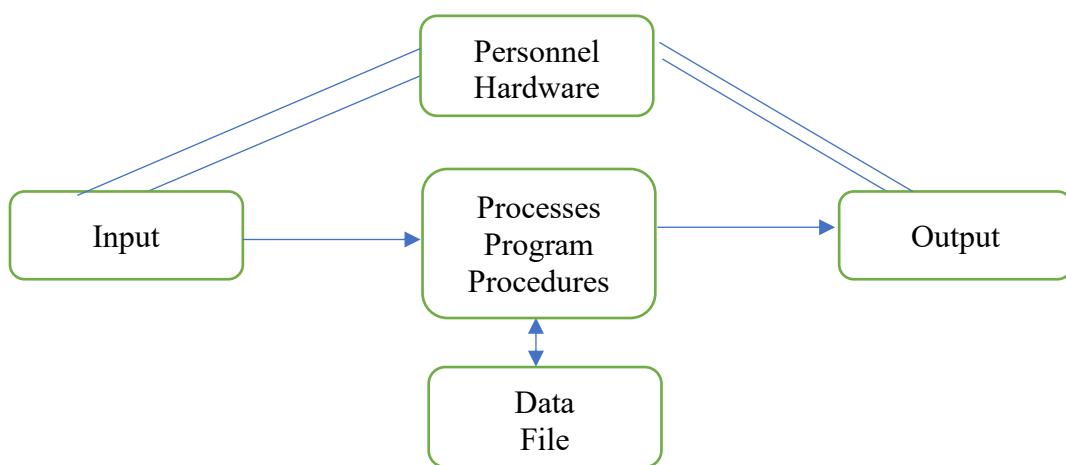
Hashem Ghassan (2013), Determine the impact of management information systems' efficiency on enhancing the efficacy of decision-making and decision-making in recognized economic domains that rely on information systems in corporate management. The analysis came to the conclusion that there is not enough information-related cooperation and coordination among the bank's departments. The efficiency of management information systems has a statistically significant impact on decision-making efficacy to varied degrees across all phases. According to the study's findings, beneficiaries' views towards information systems and their personal traits are related.

Abhishek Chopra and Mukund Chaudhary (2020), Organizations must follow ethical guidelines for information security experts and those tasked with accessing sensitive data. Confidential information should only be accessed by authorized individuals, who frequently have the highest authority inside the company.

The Management Information Systems (MIS) is comparatively a new concept which involves decision making and taking of a manager in the competitive business world. It understands

and describe in several ways. It is also known as the Information System, the Information and Decision System, the Computer-based information System (Davis & Geist, 2004).

In other word, MIS defines a system which provides information support for decision making in the organization. The MIS defines as an integrated system of man and machine for providing the information to support the operations, the management and the decision-making function in the organization. The MIS is defined as a system based on the database of the organization evolved to provide information to the people in the organization. The MIS defines as a computer-based information system. The information system is entirely related elements among themselves, which function together for collecting, processing, and saving of information distribution. The information system a formalized computer system that collects, stores, processes, and reports data from various sources to provide information needed to managers (O. Hicks, 2003).



Source: (Ali, 2019)

Based on the literature, the following hypotheses were formulated:

- H<sub>1</sub>: Information quality has a significant positive effect on information system effectiveness.
  - H<sub>2</sub>: Timeliness has a significant positive effect on information system effectiveness.
  - H<sub>3</sub>: Reliability has a significant positive effect on information system effectiveness.

## RESEARCH METHODOLOGY

This study adopted a quantitative research approach using a descriptive and causal research design. The population consisted of employees working in commercial banks. A sample of 120 respondents was selected using convenience sampling due to accessibility constraints.

Data were collected through a structured questionnaire comprising five items for each construct: information quality, timeliness, reliability, and information system effectiveness. Responses were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The reliability of the measurement instrument was assessed using Cronbach's alpha, and all constructs exceeded the acceptable threshold of 0.70. Data analysis was conducted using descriptive statistics, correlation analysis, and multiple regression analysis.

Table :

Variable	Information Quality	Timeliness	Reliability	Decision Making
Information Quality	1			
Timeliness	.62**	1		
Reliability	.65**	.60**	1	
Decision Making	.71**	.66**	.74**	1

Source: SPSS Output

The reliability analysis indicated strong internal consistency among the measurement items. Descriptive statistics showed that respondents generally perceived high levels of information quality, timeliness, and reliability in their information systems.

Correlation analysis revealed significant positive relationships between all independent variables and information system effectiveness. Multiple regression analysis further confirmed that information quality, timeliness, and reliability significantly influence information system effectiveness. Among the predictors, reliability demonstrated the strongest impact, followed by information quality and timeliness. Thus, all proposed hypotheses were supported.

### *Reliability Statistics of Study Variables*

Construct	No of Items	Cronbach's $\alpha$
Information Quality	5	.83
Timeliness	5	.81
Reliability	5	.86
Decision Making	5	.84

Source: SPSS Output

Cronbach's alpha values greater than .70 indicate acceptable internal consistency (Nunnally & Bernstein, 1994).

The correlation matrix indicates strong and statistically significant positive relationships among all study variables. Information Quality is positively correlated with Timeliness ( $r = .62$ ,  $p < .01$ ), Reliability ( $r = .65$ ,  $p < .01$ ), and Decision Making ( $r = .71$ ,  $p < .01$ ). Similarly, Timeliness shows a significant positive association with Reliability ( $r = .60$ ,  $p < .01$ ) and Decision Making ( $r = .66$ ,  $p < .01$ ). Reliability also has a strong positive correlation with Decision Making ( $r = .74$ ,  $p < .01$ ). These results suggest that higher levels of information quality, timeliness, and reliability are associated with improved decision-making effectiveness.

**Table 4**  
*Summary of Hypotheses Testing*

Hypothesis	Statement	Result
H <sub>1</sub>	Information Quality significantly affects Decision Making	Supported
H <sub>2</sub>	Timeliness significantly affects Decision Making	Supported
H <sub>3</sub>	Reliability significantly affects Decision Making	Supported

*Source: SPSS Output*

### Findings

The findings of this study are consistent with prior MIS research, reinforcing the importance of high-quality, timely, and reliable information systems in the banking sector. The strong influence of reliability highlights the critical role of system stability and consistency in building user trust and enhancing system effectiveness.

These results suggest that banks should not only focus on technological investments but also emphasize improving information accuracy, ensuring timely information

### Model Summary:

- $R^2 = .68$
- Adjusted  $R^2 = .67$
- $F(3, 116) = 82.14, p < .001$

✓ Model explains 68% variance — very strong for MIS research.

### 4. Hypothesis Testing Summary

delivery, and maintaining system reliability to maximize the benefits of MIS.

### Conclusion and Implications

This study concludes that information quality, timeliness, and reliability are key determinants of information system effectiveness in commercial banks. The findings have important managerial implications, suggesting that bank management should prioritize these dimensions when designing and implementing information systems.

From an academic perspective, the study contributes to the MIS literature by providing empirical evidence from the banking sector of a developing economy. Future research may extend this study by incorporating

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mediating variables such as user satisfaction or decision-making effectiveness, or by employing advanced analytical techniques such as structural equation modeling.

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