A role of management information system (MIS) in organisation

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Abstract:

The technology is impacting areas of operations, project, and management and marketing which in turns contributes to productivity, efficiency, effectiveness and overall growth of an organisation. The Management Information System keeps business management updated with well-structured information to achieve organisational objectives efficiently.

The concept of Information System (IS) was derived from Information Technology. Now, IS becomes more efficient which gives extremely productive result. Information System is a set of inter-related components that collects, stores, processes, generates and disseminates information for effective business functioning. The IS can be useful for individual departments and collectively for all departments.

The Management Information System (MIS) provides information to the management, which helps in decision making and effective business management. MIS is the system of people, equipment, procedures, documents and communication that collects, validates, operates on, transforms, stores, retrieves and presents data for use in planning, budgeting, accounting, controlling and other management processes.

MIS is having core operations of logistic and supply chain management, production industry, finance and accounting, human resource management, customer relationship management, inventory management, purchasing and merchandising, orders and delivery, E-commerce.

Reports created for these core operations help in developing business, aiding extraction of meaningful information from the business data and thus enhancing the business decision-making process.

This article explains the nature and scope of MIS, characteristic of MIS, need for MIS and applications of MIS in various departments of organisation.

Keywords:

Information System, Management Information System, Applications of MIS in finance and accounting, marketing, production, human resource management, strategic management.

1. Introduction:

An information system is a resourceful tool, which has become an indispensable element of organisational decision making. The concept of Information System (IS) was derived from Information Technology. The data for the IS can be collected from various inter-organisation and intra-organisation sources such as employee's personal details and competitor's performance.

This data can be stored manually in a documented form or in an electronic format. The processing of this data includes calculations, logical analysis and other stastical methods depending upon the information to be derived. Once data is processed, it is transformed into information. This information is disseminated to various end users to support their decision making, problem solving, strategy forming and controlling functions in the organisation.

2. Management information system (MIS):

Management is the process of planning, organising, directing and controlling resources to achieve business objectives effectively.

According to Coleman and Ritley, an MIS –

Applies to all management levels

Is linked to organisational subsystem

Functions to measure performance, monitor progress, evaluate alternatives or provide knowledge for change or collective action; and

Is flexible both internally and externally.

The structure of the MIS is as below –

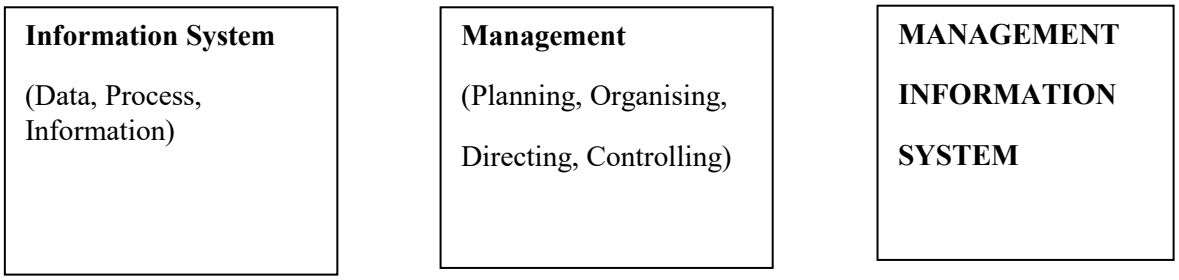


Figure. 1: Structure of MIS

The data is collected from various internal and external resources. Technical and analytical measures are utilised to process this data. After processing, the data is transformed into meaningful information. This information supports each level of decision making; thereby improving organisational effectiveness.

3. Nature and scope of MIS:

MIS provides useful information to managers for making various business decisions. The nature of MIS is explained as follows –

1. **System Approach –** It refers to the approach of input, process and output involved in business decision making.
2. **Technology-based concept –** This concept explains the utilisation of various technologies for data processing in the system.
3. **Interdisciplinary concept –** This encompasses all business disciplines such as accounting, computer science, operational research, statistics, behavioural science and management

MIS helps in analysing and organising unstructured data collected from various resources. The conversion of such data into meaningful information creates an opportunity for the management to make the best productive decisions at various levels. Information technology has significantly broadened the scope of MIS.

4. Characteristics of MIS:

The following are the characteristics of MIS –

1. **Management Orientation –** MIS deals with managerial processes such as decision making, production planning and goal setting.
2. **Need Based –** MIS fulfils information needs of managers.
3. **Integration –** MIS integrates various processes and resources and provides integrated information when required.
4. **Growth Orientation –** MIS facilitates growth through effective planning and control of production processes.
5. **Flexibility of Process –** It implies that various processes followed in the MIS are flexible in nature.

5. Need for MIS:

MIS provides supports to management functions at all levels of an organisation. Various benefits that create a need for MIS in the organisation are as follows –

1. Fulfills information requirements of the organisation in setting goals
2. Facilitates effective decision-making measures
3. Organise data from various resources
4. Ensure the efficiency of planning in the organisation
5. Provides an effective control on operational functions
6. Facilitates the flow of information among employees of different levels

6. Structure of MIS:

There is no rigid structure of MIS. However, MIS comprises four elements as below –

1. Physical Components
2. Information Processing
3. Management Function
4. Decision Support

The four elements of MIS are detailed as –

6.1. Physical Components: The MIS components that can be physically examined fall under this category. These include –

- Hardware
- Software
- Database
- Network
- People

6.2. Information Processing: The information processing components of MIS includes the following elements:

- Data analysis
- Management of files
- Processing of queries
- Report generation

6.3. Management Functions: The following are three types of management functions:

- Strategic level functions
- Tactical level functions
- Operational level functions

6.4. Decision Support: A decision can be of two types –

- Structured decision – are dependent on previous decisions and are operational in nature
- Unstructured decisions – are not related to any previous decisions and are administrative in nature

7. Applications of MIS:

Following are the applications of MIS in various fields:

7.1. Application of MIS in Finance and Accounting:

1. Accounting Information System – According to the American Accounting Association –

Accounting is the process of identifying, measuring and communicating economic information to permit informed judgement and decisions by users of the information.

Accounting involves following steps –

- Recording
- Classifying
- Summarising
- Analysing and interpreting

- Communicating

Every organisation needs accounting information to determine it, present financial status and improve its level of profit earning.

2. Financial Management Information System – It is a computerised system that supports financial decision making in an organisation by collecting, storing and analysing financial data.

The functions of financial management information system are –

- Financial Forecasting
- Investment Management
- Cash Management

3. Integrated Financial Management Information System (IFMIS) – supports financial decision making, maintain the confidentiality of required standards and prepares financial reports and statements.

7.2. Application of MIS in marketing:

The marketing information system is a computerised system that is designed to provide an organised flow of information and support marketing activities of an organisation. The marketing information system provides the following information related to the market –

- Recurrent information – customer expectations, changing needs
- Monitoring information – obtained by scanning information sources
- Requested information – generated in response to request

Advantages of Marketing Information System –

- Market monitoring
- Strategy development
- Functional integration

Functions of Marketing Information System –

- Sales Management
- Advertising and Promotion
- Pricing
- Selection of Distribution Channel
- Marketing Research

A marketing strategy is a plan that explains how goals will be achieved within a stipulated timeframe. This system also helps an organisation in the allocation of resources, which further helps in achieving the organisation's marketing objective.

7.3. Application of MIS in production:–

Production is the process of transforming raw materials into the desired product or service. MIS used for production is called the production operating system. Production operating system provides information related to five main areas as –

1. Product Planning – Product design and development, Prototyping and Product testing
2. Inventory Management – Purchase planning, Inventory planning and Control
3. Supply Chain Management
4. Production Process – Production planning, Product Manufacturing, Quality & Control
5. Production Cost – Production Cost Analysis, Cost Effective Production

7.4. Application of MIS in human resource management:

Human Resource (HR) function is called Human Resource Information System (HRIS). Functioning of HRIS is as follows –

1. External Recruitment Sources
2. Employment & Human Resource Planning – Work, Training, Compensation
3. Internal Recruitment Sources

- Advantages of HRIS –

1. Multiple Applications
2. User-friendliness

Tactical HRIS helps managers in taking decisions related to the allocation of resources. Such decisions are as follows –

1. Recruitment – involves identifying and attracting the deserving applicants for a job to maintain a pool of capable and competent human resources.

2. Job Analysis – involves identifying and recording various aspects related to a job.
3. Compensation Management – involves deciding the remuneration of the employees in the form of salary and incentives in accordance with their skills and competencies.
4. Succession Planning – refers to a process of ensuring a suitable supply of successors for current and future key jobs.
5. Workforce Planning – involves identifying the gap between existing workforce and required workforce.

7.5. Application of MIS in strategic management:

MIS provides an ideal platform to an organisation for strategic development. The organisation achieves a competitive edge when it performs better than other players in its business environment. The organisation's performance has an important bearing on its productivity, profitability and growth.

A strategy refers to a plan of action to achieve a specific target. It is a route map, which includes steps, actions, standards, plans and policies required to attain future goals of an organisation.

Strategic MIS helps an organisation in performing following functions –

- Strategic planning
- Strategic decision making
- Strategy implementation and control

Every organisation formulates and implements multiple strategies at different levels. Generally, there are three strategy levels, as shown in table below:

Table. 1: Different Strategy Level

Strategy Level	Strategies	Models Used
Industry Level Strategy	Cost leadership, Competition, Organisational Standards	Competitive Forces Model
Firm Level Strategy	Synergy, Core competencies	Core Competency Model
Business Level Strategy	Low cost, Product differentiation, Change in the scope of competition	Value Chain Analysis Model

7.6. Customer Relationship Management (CRM):

The success of organisation directly depends upon the level of customer satisfaction. Therefore it is important for the organisation to build rapport with customers, identify their needs and expectations and fulfil them. Maintaining successful relationship with customers helps the organisation attract new prospects and enhance its market share. CRM is a tool that helps in determining mutually satisfying goals between the organisation and its customers.

7.7. Supply Chain Management (SCM) System:

The SCM system is an information system that helps in planning, organising, directing and controlling activities related to the procurement of the required materials in an organisation. It also helps in coordinating and integrating links involved in this process. These links include supplies, transporters, wholesalers, retailers and customers, for flow of goods and services. An effective and timely feedback to organisation is necessary at each link.

8. Conclusion:

MIS has various applications in different functions of an organisation, such as finance, accounting, marketing, human resource and production. General business accounting depends heavily on logical calculations and analysis that are made easy with MIS. The financial decision making process of an organisation is facilitated by financial MIS. The strategic MIS assists the organisation in formulating strategies. There are some other strategic applications of MIS, such as CRM, SCM, etc.

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