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Business Intelligence & Its's Role in Management Information System

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ABSTRACT: Any organization's ability to perform depends on its ability to form selections. To develop higher preferences in today's competitive world, managers should have the proper info at the correct time to bridge the gap between what would like and expectation—applicable Management Information Systems (MIS) square measure needed to push higher info flow. To form effective selections, all levels of management should have an intensive awareness of the MIS utilized in the organization.

A management system collects and analyses knowledge (information) and makes it on the market to managers in any respect levels for decision-making, planning, program execution, and management. The MIS encompasses a form of responsibilities and calls support, performance observation, and user support.

Organizations must possess access to particular info and information in today's robust business setting. Business intelligence (BI) may be a term that refers to a set of tools, strategies, and solutions that assist managers in gaining a more robust understanding of their company's position. Bi tools can even facilitate corporations to meet their informational information desires. In lightweight of the growing trend of Bi analysis in Bi ideas and applications, this study consistently reviews recent analysis and publications from educational journals during this subject to spot and place business intelligence ideas and approaches. As a result, analysis was divided into management, technological, and system enabling approaches.

KEYWORDS: MIS, decision making, Business intelligence, Business Intelligence Approaches

I. INTRODUCTION

People, machines, procedures, databases, and data models are all part of the Management Information Systems (MIS) system. The system collects data from both internal and external sources, analyses it, and provides Management Information to help managers make decisions. As a result, an information system might be defined as "a system consisting of the network of all communication channels employed within an enterprise."

Investing in information systems can pay off for a company in many ways.

1. It can support a core competency.
2. Enhance distribution channel management.
3. Builds brand equity.
4. IT investment can boost production processes
5. Information systems allow a company flexibility in its output level.

In today's fast-changing world, the capacity to correct and just-in-time information is essential for success and survival. Company intelligence (BI) is a management philosophy and a tool that helps companies organize and refine business data to make better decisions (Ghoshal & Kim, 1986; Gilad & Gilad, 1986). The efficient use of data in sales, finance, and storage systems may be a challenge for various enterprises with varying responsibilities, contexts, and dimensions.

Data can be a helpful resource for extracting knowledge and making critical managerial decisions in several corporate contexts. In order to increase data in organizations, one of the most contemporary management tools is to use that data



and analyze it. Making timely and precise decisions necessitates a command of genuine and comprehensive data, which traditional information systems cannot produce to the appropriate standard.

II. BUSINESS INTELLIGENCE

Business intelligence is the act of gathering and analysing data to aid decision-making. It employs many approaches to assist firms in forecasting the behaviour of competitors, suppliers, consumers, and environments in order to stay alive and well in the global economy.

Also, by utilising tools such as data mining and data warehousing, it is possible to make better decisions and gain a competitive edge, and by aligning personal and organisational goals, synergy and enhanced performance can be achieved.

Business intelligence, or BI, is a popularised umbrella phrase coined by Gartner Group analyst Howard Dresner in 1989 to define a combination of concepts and methodologies for improving business decision-making through fact-based computerized support systems (Nylund, 1999). Briefing books and executive information systems are two terms that are occasionally used interchangeably. A business intelligence system (BIS) is a data-driven DSS that primarily facilitates querying a historical database and generating periodic summary reports.

Over the years, data-driven DSS has been referred to as data-oriented DSS (Alter, 1980), retrieval-only DSS (Bonczek, Holsapple, & Whinston, 1981), Executive Information Systems, OLAP systems, and Business Intelligence systems. Business intelligence or BI is a set of skills, tools, approaches, and solutions that assist managers in gaining a better understanding of their company's position. People can receive a glimpse of the past, present, and future using BI technologies.

With the introduction of BI approaches, the existing contact information gap between top managers and middle managers will shrink, and managers will be able to obtain high-quality information at all levels and at any time. Experts and analysts will also be able to improve.

Characteristics of Business Intelligence system:-

1. It is made by gathering data and information for decision-making purposes.
2. It is a mash-up of abilities, procedures, technology, applications, and methods.
3. It includes background information as well as reporting tools.
4. It includes of a set of concepts and methodologies that are backed up by factual evidence.
5. It is a supplement to the Executive Support System or Executive Information System.
6. It gathers, combines, saves, analyses, and makes business data accessible.
7. It is a setting where business users may acquire dependable, secure, consistent, understandable, manipulable, and timely information.
8. It gives the business insights that help you make better, faster, and more informed decisions.

III. NEED FOR BUSINESS INFORMATION SYSTEM

All managerial functions are carried out through decision-making, which is a commonly acknowledged reality. Timely and trustworthy information is necessary for making reasonable judgments, and it is obtained through a logical approach of gathering, processing, and presenting information to decision-makers.

In today's world of ever-increasing business complexities, every firm must have a properly planned, evaluated, developed, and managed MIS in order to survive and flourish. This demand is much greater now because businesses must compete for not only locally but also worldwide.

Benefits of BIS:-

- Improves Management Processes as a result of BIS.
- Changes that result in improved revenues and lower expenses are planned, controlled, measured, and implemented.
- Improves Business processes.



- Fraud detection, order processing, and buying that leads to more revenues and lower expenses.
- The future forecast that is intelligent.

Business Intelligence Techniques :-

- Data mining: identifying trends and establishing links by sifting through vast datasets utilizing databases, statistics, and machine learning
- Querying: a request from a database for specified data or information
- Data preparation: the process of integrating and organizing data so that it may be analyzed
- Reporting: decision-makers with operating and financial data analysis so they may draw findings and make decisions
- Benchmarking: tracking performance versus industry bests by comparing current business processes and performance measures against previous data
- Descriptive analytics: the usage of historical data to make comparisons and gain a better understanding of how a firm has changed
- Statistical analysis: Using descriptive analytics to collect data and use statistics to find patterns
- Data visualization: offers data analysis with visual representations such as charts and graphs

IV. RESEARCHERS REVIEW & ANALYSIS

After reviewing several papers on business intelligence, they were divided into three categories: management, technical, and enabling perspectives.

The following pie chart, figure 1 depicts the percentage of each strategy in the papers examined. In this view, the role of BI is to establish an informational environment in which operational data acquired from transactional systems and external sources can be examined in order to provide strategic knowledge to support making instructional organization decisions. This indicates that half of the definitions place a premium on decision-making excellence and optimal decision-making, with the remaining definitions reserving the highest level of contribution.

The technical approach, which focuses on technologies that enable BI procedures in a management setting, is ranked second. This means that using tools like data mining and databases, this technique aids in the enhancement of decision-making processes and information analysis. The enabler method, which focuses on value-added capabilities to informational assistance and has a 21 percent share, also contributes to the effective development of businesses and achieving competitive advantages.

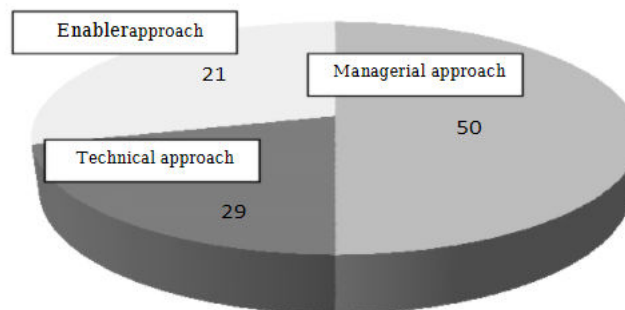


Figure 1: Percent of Each Approach in Various Articles

The last ten years' worth of important BI publications has been examined. Figure 3 depicts the fact that papers published in 2008, primarily in the " Information Management Systems" journal - a journal with a managerial perspective and a focus on excellence in management decision making - have made the most significant contribution to the introduction and cultivation of business intelligence based on a managerial approach and a focus on managerial decision making. BI has been mentioned as a support for organizations.



Prior to 2005, most studies focused on either technological approaches and tools to assist knowledge processes or enabling approaches. However, after 2005, the emphasis shifts to management. The peak in interest in BI can be traced back to 2008, when the focus shifted from managerial to facilitator.

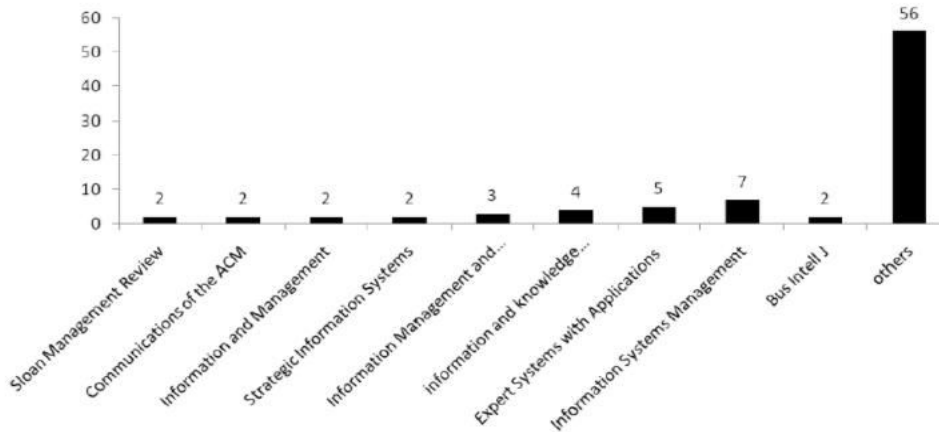


Figure 2: Comparing the number of articles to define business intelligence in different journals

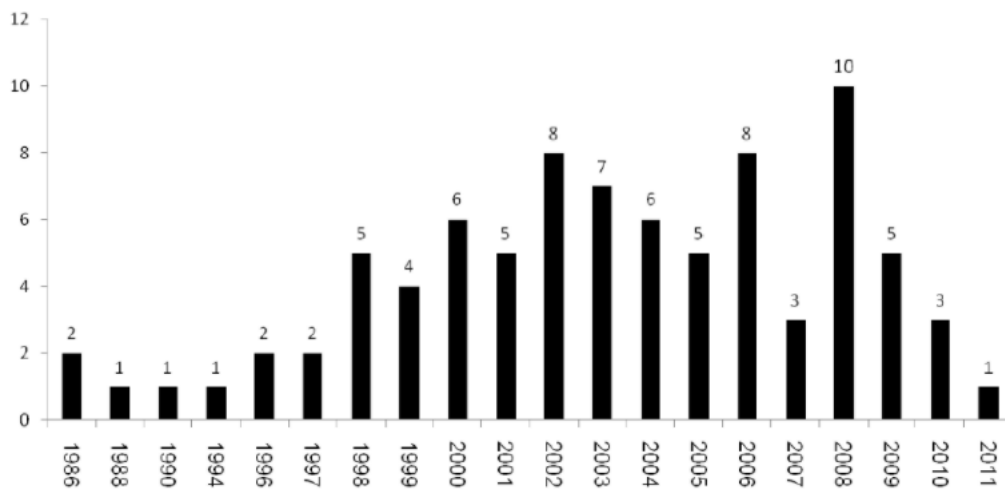


Figure 3: Comparing the number of articles to define business intelligence in different years

V. CONCLUSION

Business intelligence is a notion in management that refers to a combination of programs and technology that enable organizations to acquire, analyse, and retrieve data from their operations. BI aids firms with a thorough understanding of business-affecting aspects such as sales standards, production procedures, and internal organizational processes. The ultimate purpose of any business intelligence system is to make optimum choices as quickly as possible and at all company levels.

In this paper, our aim is to convey BI principles and their various organizational techniques. Classifying concepts and diverse management styles helps businesses foster positive thinking by emphasizing degrees of attention, allocating tasks, etc.



By the end of this review research, business intelligence ideas were divided into three categories: managerial, emphasizing decision-making excellence, and operational. Enable with an emphasis on value-added capabilities in support of shared information and technical focus on tools enabling business intelligence. Although the initial focus was on the management strategy, the attention switched to the technical approach and eventually to the enabling system with time and additional study.

Finally, researchers should include making-decision support needs in Business intelligence while improving organization systems such as Enterprise Resource Planning (ERP).

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