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A Study on Data Driven Decision Making in Business Analyst with Reference to Octosignals

A.Leninnathan
Department of Master of Business Administration,
Sengunthar Engineering college (Autonomous),Tiruchengode,India
leninnathan84@gmail.com
S.Pavithra
Assistant Professor, Department of Master of Business Administration
Sengunthar Engineering College (Autonomous), Tiruchengode,India
spavithra.mba@scteng.co.in
https://www.orcid.org/0009-0002-6296-748X

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Abstract: In the modern business environment, organizations increasingly rely on data to make accurate and strategic decisions. Data-driven decision making (DDDM) allows businesses to analyse structured and unstructured data to identify patterns, predict outcomes, and optimize performance. This study focuses on the role of data-driven decision making among business analysts with reference to Octosignals, Kerala. The research examines how data analytics tools, data visualization techniques, and analytical models support business analysts in improving operational efficiency and strategic planning. The study also highlights the benefits, challenges, and impact of data-driven decisions on organizational performance.

Keywords: Business Intelligence, Big Data, Business Analytics, Data-Driven Decision Making, Predictive Analytics, Machine Learning.

INTRODUCTION

In today's competitive business world, decision making based on intuition alone is no longer sufficient. Organizations rely on data analytics to support their strategic decisions. Data-driven decision making refers to the process of collecting, analysing, and interpreting data to guide business strategies. Business analysts play a crucial role in transforming raw data into meaningful insights that support management decisions. Octosignals, located in Kerala, is a technology-oriented organization that utilizes data analytics to improve business processes and operational efficiency. The company relies on business analysts to analyse customer data, market trends, and operational metrics to support strategic decisions. By implementing data-driven decision making, organizations like Octosignals can reduce risks, improve productivity, and enhance customer satisfaction.

REVIEW OF LITERATURE

Data-driven decision making has become an essential practice in modern organizations as businesses increasingly rely on data analytics to support strategic planning and operational improvements. Several researchers have examined the role of data analytics and business intelligence in improving organizational performance and decision-making processes.

Davenport and Harris (2007) emphasized that organizations that rely on analytics and data-driven insights gain a significant competitive advantage. Their research highlighted how companies use statistical analysis, predictive modelling, and business intelligence tools to improve decision accuracy and business performance. The study also pointed out that analytical capabilities enable organizations to make faster and more effective strategic decisions.

Provost and Fawcett (2013) explained that data science and analytics play a critical role in modern business environments. Their research focused on how businesses can transform raw data into valuable insights that support decision making. The authors argued that organizations that adopt data-driven strategies can better understand customer behaviour, market trends, and operational efficiencies.

McAfee and Brynjolfsson (2012) examined the impact of big data on business decision making. Their study concluded that companies using data-driven approaches perform better in terms of productivity and profitability compared to organizations that rely on traditional decision-making methods. The researchers also highlighted the importance of data management systems and analytical tools in supporting business intelligence.

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Sharda, Delen, and Turban (2018) discussed the role of business intelligence systems in improving organizational decision making. Their research explained how data visualization, dashboards, and analytical models help business analysts' present complex data in an understandable format. The study emphasized that decision support systems allow managers to make more accurate and informed decisions.

Chen, Chiang, and Storey (2012) focused on the role of big data analytics in business innovation and decision making. Their study highlighted that organizations can use advanced analytics techniques to identify new business opportunities, improve customer satisfaction, and enhance operational efficiency. The research also emphasized the importance of integrating multiple data sources for effective decision making.

Power (2007) studied the role of decision support systems in organizational decision making. The study explained that analytical models and computerized systems assist managers in evaluating various alternatives before making strategic decisions. According to the research, decision support systems improve the quality and speed of business decisions.

OBJECTIVES OF THE STUDY

1. To understand the concept of data-driven decision making in business analytics.
2. To analyse the role of business analysts in decision making at Octosignals.
3. To identify the tools and technologies used for data-driven decisions.
4. To evaluate the benefits of data analytics in business operations.
5. To identify challenges faced while implementing data-driven decision making.

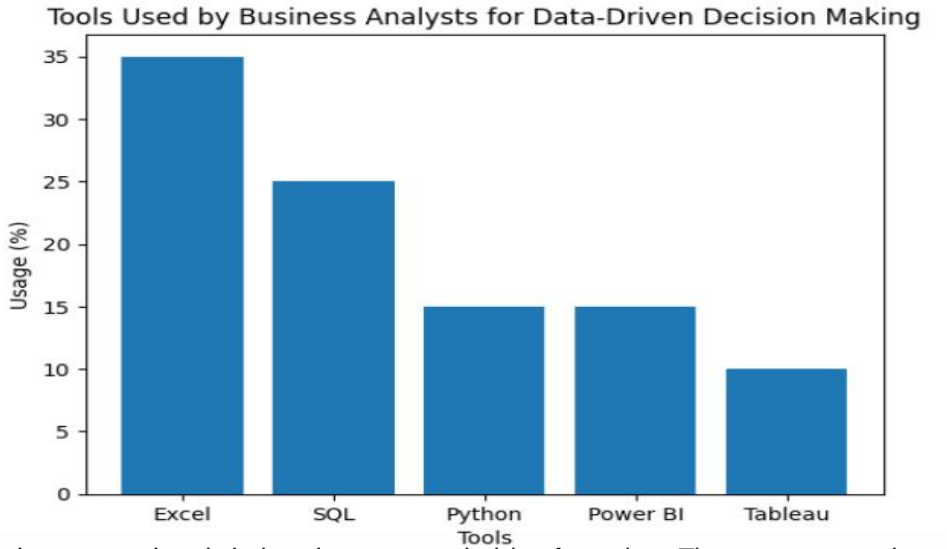
RESEARCH METHODOLOGY

The research is descriptive in nature and focuses on understanding the application of data analytics in decision making. Both primary and secondary data sources are used in the study.

Primary data was collected through structured questionnaires and interviews with business analysts and employees at Octosignals. Secondary data was collected from journals, company reports, research articles, and online databases related to data analytics and decision making.

The sample size includes employees working in analytics and decision-making roles. Statistical tools such as percentage analysis and graphical representation were used to interpret the data.

TOOLS USED BY BUSINESS ANALYSTS



Business analysts rely on several analytical tools to extract insights from data. The most commonly used tools include Excel, SQL, Python, Power BI, and Tableau. These tools help analysts perform data cleaning, visualization, predictive analysis, and reporting. Excel is widely used for basic data analysis and reporting. SQL is used to extract data from databases, while Python supports advanced analytics and machine learning. Visualization tools such as Power BI and Tableau help present insights in an understandable format for management decision making.

ROLE OF DATA-DRIVEN DECISION MAKING AT OCTOSIGNALS

At Octosignals, data plays a key role in improving operational efficiency and strategic planning. Business analysts collect and analyze data from various sources such as customer databases, sales reports, and market analytics platforms. The insights generated from this data help management identify trends, predict future demand, and optimize business strategies. For example, customer behavior analysis helps the company understand purchasing patterns and preferences. Market trend analysis allows the company to identify potential opportunities and emerging market demands. Operational data analysis improves workflow efficiency and resource allocation. By implementing data-driven decision making, Octosignals can minimize uncertainties and make informed strategic decisions.

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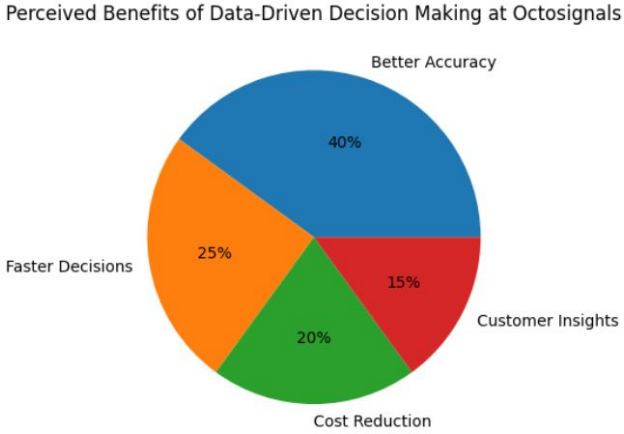
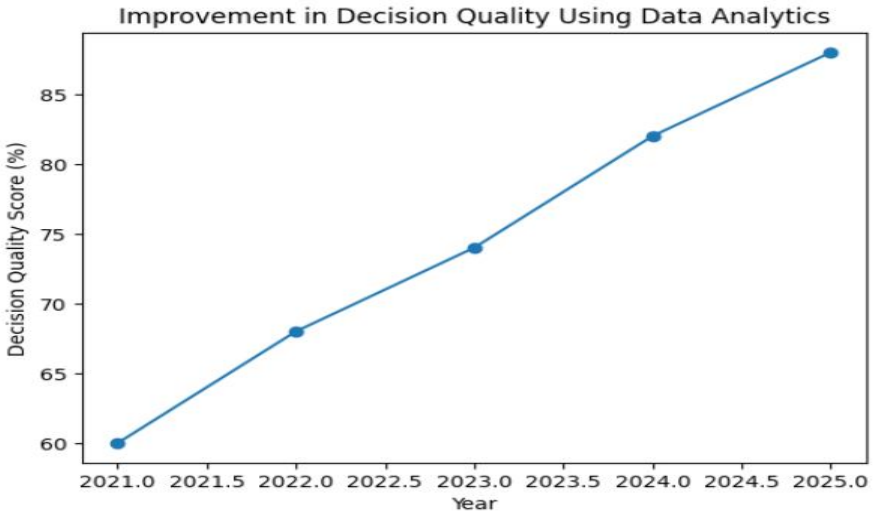
BENEFITS OF DATA-DRIVEN DECISION MAKING



Data-driven decision making provides several benefits to organizations. One of the primary advantages is improved accuracy in business decisions. Data analysis helps identify patterns and relationships that may not be visible through traditional decision-making methods. Another major benefit is faster decision making. Real-time analytics tools allow managers to access up-to-date information and respond quickly to market changes. Data analytics also helps reduce operational costs by identifying inefficiencies and optimizing resource utilization. Customer insights are another significant benefit. By analyzing customer data, businesses can understand customer preferences, improve service quality, and enhance customer satisfaction.

IMPROVEMENT IN DECISION QUALITY USING DATA ANALYTICS



CHALLENGES IN IMPLEMENTING DATA-DRIVEN DECISION MAKING

Despite its advantages, organizations face several challenges in implementing data-driven decision making. One of the main challenges is data quality issues. Inaccurate or incomplete data can lead to incorrect conclusions and poor decision making. Another challenge is the lack of skilled professionals who can analyze complex datasets and interpret insights effectively. Data security and privacy concerns also create challenges for organizations handling large volumes of sensitive information. Additionally, integrating data from multiple sources can be difficult and time consuming. Organizations must invest in advanced data management systems and training programs to overcome these challenges.

FINDINGS OF THE STUDY

The study reveals that data-driven decision making significantly improves the efficiency of business operations. Business analysts at Octosignals rely heavily on analytical tools to process and interpret data. The research also indicates that organizations using data analytics achieve better strategic outcomes compared to those relying solely on traditional decision-making approaches. The results show that data analytics helps organizations improve decision accuracy, reduce operational costs, and enhance customer satisfaction. However, challenges such as data quality issues and lack of skilled professionals must be addressed to fully utilize the potential of data-driven decision making.

SUGGESTIONS

Organizations should invest in advanced data analytics tools and technologies to improve their decision-making capabilities. Training programs should be conducted to enhance the analytical skills of employees and business analysts.

Companies should also implement proper data governance policies to ensure data quality and security. Integration of artificial intelligence and machine learning technologies can further enhance the effectiveness of data-driven decision making. Additionally, organizations should encourage a data-driven culture where decisions are based on factual insights rather than assumptions.

CONCLUSION

Data-driven decision making has become an essential component of modern business strategies. Organizations like Octosignals utilize data analytics to improve operational efficiency, identify market opportunities, and make informed strategic decisions. Business analysts play a critical role in transforming raw data into meaningful insights that support management decisions. The study concludes that implementing data-driven decision making significantly enhances business performance and competitive advantage. By addressing challenges such as data quality issues and skill gaps, organizations can fully leverage the power of data analytics to achieve sustainable growth.

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