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The Strategic Impact of Business Intelligence Tools: A Review of Decision-Making and Ambidexterity

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Abstract:

This study aims at exploring the use of Business Intelligence (BI) tools in supporting decision making processes at strategic, tactical and operational levels. In this study, the research data is collected from secondary sources including the academic developments, business reports, and case analysis to investigate the role of BI in enhancing the decision making, organizational ambidexterity, and strategic alignment in different business sectors. The research also shows that the use of BI tools enhances decision making accuracy and quickness, giving organizations valuable information for informed decision making. The present work also discusses how BI can help organizations to attain organizational ambidexterity, i.e., the ability to explore new markets while, at the same time, exploiting the existing ones. However, the analysis also finds that there are critical problems, including data integration, limited resources, and the search for an optimal balance between analytics and intuition. A comparison with other industries shows that while BI tools have a rather high potential, their efficiency strongly depends on the context and may require a unique approach to address the needs of a particular industry. This research work will also be useful to managers and other stakeholders in organizations in order to enhance their understanding on how to effectively integrate BI to gain competitive advantage in today's business environment.

Keywords: Business Intelligence, Decision-Making, Organizational Ambidexterity, Strategic Alignment, Data-Driven Insights

Introduction

BI has emerged as an essential component of strategic management since organizations face the challenge of analyzing and interpreting a growing volume of data. Business intelligence, a set of highly sophisticated tools, including data mining, analytics, machine learning, etc., enables companies to turn data into useful information that helps improve strategic planning and effective management. Globally, the amount of available data and its complexity are increasing, necessitating the adoption of BI tools by firms to maintain competitiveness, flexibility, and knowledge. These factors include the COVID-19 pandemic situation, which required organizations to quickly adapt to new conditions and make data-driven decisions (Pérez-Campuzano et al., 2021). BI helps organizations to access historical data and real-time data; it promotes a more proactive approach to decision-making, which is especially important in today's unpredictable markets and towards achieving long-term strategic objectives (Alzghoul et al., 2022). The idea behind BI in SM comes from its contribution to the idea of "organizational ambidexterity," which means being able to explore (look for new opportunities) and exploit (use available resources) at the same time. Studies by Alshaar et al. (2023) and O'Reilly & Tushman (2013) have demonstrated that organizations possessing this ambidexterity, which allows them to successfully iterate through a dual structure while incorporating BI tools to stay competitive and adapt to market changes, are more efficient. This double benefit of BI enables organizations to adopt BI for tactical decisions as well as for supporting organizational strategy, which makes the link

between short-term operations and long-term visions (García Joerger, 2022). Having such an approach has become even more crucial in the changing environment, where technological and economic changes require organizations to make quick and correct decisions. Also, BI tools help solve the problem of finding the right balance between analytical and intuitive decision-making. They provide decision-makers with such information as is required for making a proper decision while avoiding the imposition of experience and creativity, which are vital in strategic scenarios (Zhang, 2022). According to Mahmoudi (2009), at strategic, tactical, and operational levels, BI tools improve the quality of decision-making by creating an environment for modeling decisions and predicting their consequences. For instance, at the tactical level, BI helps resolve issues that relate to current day activities through the analysis of real-time data, and at the managerial level, BI assists managers in making decisions that correspond with the firm's overall vision in order to develop better strategies (Golpaygani, 2010). This testimony demonstrates that BI is not merely a technological insertion into organizations, but rather a strategic change that significantly influences the decision-making process within these organizations. Based on Zaman (2005) and Howson (2008), BI systems are a framework that integrates technology and organizational processes to create a strong system of strategic decision-making at the right time and with high accuracy. Many organizations can choose from a variety of Business Intelligence (BI) applications that enhance their operations and provide targeted information across diverse sectors such as finance and human resources. By utilizing these BI applications, organizations can minimize expenses and maximize resource utilization. The overall objective of BI, thus, is not to just control data but to create an information landscape that orients every aspect of an organization for strategic advantage (Beikzadeh & Eskandari, 2009). In conclusion, business intelligence tools are revolutionizing managerial decision-making processes, offering organizations the much-needed clear vision to operate in today's dynamic business world. As companies incorporate these tools into their decision-making processes, the importance of Business Intelligence (BI) will only grow, enabling the development of increasingly sophisticated strategies that can enhance the robustness and effectiveness of organizations in an increasingly data-reliant economy.

Problem Statement

In the modern world where information is an essential commodity, companies are struggling with the problem of how to organize and analyze huge and often highly diverse data sets to support decision making. BI tools are indeed a solution to this challenge due to the provision of mechanisms of data gathering and analysis hence enabling organizations to make decisions at strategic, tactical and operational level (Mahmoudi, 2009; Golpaygani, 2010). The current increase in data and the complexity of data structures necessitate the use of BI tools to help organizations to maintain their competitive advantage, to respond to market changes, and to make quick decisions (Pérez-Campuzano et al., 2021; Alzghoul et al., 2022).

However, organizations face the challenge of 'organizational ambidexterity', which means organisations have to search for new opportunities and utilise current resources at the same time, while managing BI tools (Alshaar et al., 2023; O'Reilly & Tushman, 2013). This duality is important for organizations to meet both the operational needs and the strategic challenges of BI systems; however, many companies are challenged by the integration of BI systems with their strategies (García Joerger, 2022). Also, the implementation of BI in organizations has some problems in the sense that it is hard to combine data analysis with the intuition which is crucial for the best strategic decisions (Zhang, 2022).

The challenge is in the proper incorporation and use of BI tools in strategic management systems since the latter requires the former to be employed for more than just solving tactical issues. It is important to establish how much BI tools can improve decision making and speed of decision making in the contexts of increasing technological and economic changes (Howson, 2008; Beikzadeh & Eskandari, 2009). This research aims to establish the best practice that organisations can employ in order to enhance the effectiveness of the BI in view of these challenges and to achieve a system of decision making that involves the integration of technology into other business processes in order to support strategic objectives across different sectors such as finance, human resource and others (Zaman, 2005).

Rationale of the Study

As companies are operating in the environment where competition is ever increasing and the environment becomes more and more challenging, the application of BI tools becomes a major factor to support the process of strategic management. Given the fact that organizations are dealing with huge amounts of data derived from multiple sources, it becomes imperative to extract, analyze and make meaning of the data in real time for organizations to remain competitive and agile (Pérez-Campuzano et al., 2021; Alzghoul et al., 2022). This research is undertaken to establish the role of BI tools in helping organizations make timely and correct decisions in light of the increasing data availability and data complexity.

As witnessed in the COVID-19 outbreak, where swift changes in the business environment were made possible only by data-oriented approaches, BI has also become an indispensable tool in the organization's tool kit rather than just a technical solution. BI tools allow organizations to reconcile the dual nature of ambidextrous organizations, which are capable of making short-term operational decisions and long-term strategic planning thus increasing the chances of exploring new opportunities while exploiting existing ones (Alshaar et al., 2023; O'Reilly & Tushman, 2013). The purpose of this research is to examine how BI fosters this ambidexterity to enable organisations to respond effectively to market shifts while maintaining their core capabilities and resources.

Another justification for this research is based on the current problem of how organizations can implement BI systems in strategic management systems. Despite the fact that BI tools can provide decision support at the tactical, operational, and strategic levels, most organizations are still unable to fully leverage these tools mainly because decision making is both analytical and intuitive in nature (Zhang, 2022). The research will focus on identifying the ways in which organizations can attain the right balance of reason and intuition as they work to develop their strategies.

This study will also add to current literature on BI and its application in enhancing the effectiveness of organizational processes and decisions by examining how BI can create an avenue for decision making and outcome simulation (Mahmoudi, 2009; Golpaygani, 2010). This research aims to explore the application of BI in different sectors like finance and human resource to raise awareness of the potential of BI tools in streamlining the processes, improving the resources and enhancing strategic fit (Beikzadeh & Eskandari, 2009; Zaman, 2005).

In conclusion, this research is anchored on the objective of developing a framework for integrating BI in strategic decision making. This paper seeks to help in understanding the positives, negatives, and results of BI to enable organizations to enhance their decision-making and gain competitive edges in the new data-driven business environment.

Research Questions

1. How do Business Intelligence (BI) tools support strategic, tactical, and operational decision-making within organizations?

2. In what ways do BI tools contribute to achieving organizational ambidexterity by balancing exploration of new opportunities and exploitation of existing resources?

3. What are the key challenges organizations face when integrating BI tools into their strategic management frameworks?

4. How does the use of BI tools impact the accuracy, timeliness, and effectiveness of decision-making across various sectors, such as finance and human resources?

5. What factors influence the adoption and optimization of BI tools for achieving a balance between data-driven insights and intuitive judgment in decision-making processes?

Research Objectives

1. **To explore the role of BI tools in supporting different levels of decision-making** — specifically strategic, tactical, and operational — within organizations, enhancing their ability to make informed choices.

2. **To examine the impact of BI tools on organizational ambidexterity**, focusing on how BI enables organizations to simultaneously explore new opportunities and exploit existing resources for sustained competitive advantage.

3. **To identify and analyze the challenges associated with integrating BI tools into strategic management frameworks**, addressing barriers to effective implementation and optimization.

4. **To assess the effects of BI tools on decision-making quality across sectors**, including finance and human resources, particularly in terms of decision accuracy, timeliness, and strategic alignment.

5. **To investigate the balance between analytical data-driven insights and intuitive decision-making**, examining how BI tools influence this balance and support effective decision-making in complex and dynamic environments.

Methodology

This study is a secondary data research work, which **uses** datasets, reports, academic articles, case studies, and industry analysis to determine the application of Business Intelligence (BI) tools in decision-making. As a result of focusing on

secondary data, the study **considered** a wide range of organizational settings and **measured** the effects of BI on the enhancement of decision-making precision, organizational ambidexterity, and strategic alignment without the limitations of primary data collection. This approach **has been particularly useful** because there **is** a lot of literature and information on the adoption of BI in different industries and organizations.

Research Design - The research method used in the study **was** descriptive research, which **has been appropriate** for the analysis of secondary data. Descriptive research **provided** a clear picture of the current state of affairs concerning BI use in decision-making, which **is** the "what" of BI tools rather than the "why" or "how." This design **has facilitated** the identification of gaps in the literature, case studies, and reports that **have been useful** in identifying how BI tools **are** applied at strategic, tactical, and operational levels.

Data Sources - The secondary data **was sourced** from:

- **Academic Journals and Articles**: Academic data **was retrieved** from peer-reviewed journals and articles only from Google Scholar, IEEE Xplore, and ScienceDirect. These sources **have provided** a theoretical framework on the usefulness, difficulties, and uses of BI tools across various organizations.

- **Industry Reports and White Papers**: The survey data from consulting firms such as McKinsey & Company, Gartner, and Deloitte **was used** to provide factual information on the use of BI, the challenges of technology adoption, and real-life examples from different industries from the BI leaders such as IBM, Microsoft, SAS, among others. These sources **have complemented** theoretical knowledge by providing examples of how BI tools **are** used and what results **can be achieved** in today's business settings.

- **Case Studies**: Real-life examples of organizations that **have adopted** BI systems **were discussed** to look at specific examples of how BI tools **have been integrated**. This **has aided** in the identification of the opportunities, risks, and results of BI implementation in achieving organizational ambidexterity and improved decision-making.

- **Government and Organizational Databases**: Quantitative data on the size, growth, and areas of BI market development **was sourced** from databases like Statista as well as from the official reports of government bodies, including the U.S. Bureau of Labor Statistics.

- **Historical Data**: Previous information on BI systems **was discussed** to establish the development of BI systems, the trends of BI adoption, and the changes in decision-making within organizations. This **has assisted** in situating the research's results within the wider context of BI development and digital change management in organizations.

Data Collection Process - The source of data for this study **was collected** systematically to ensure that the data collected **was relevant** and credible, avoiding data that **might have been** irrelevant or inaccurate. The steps for data collection **included**:

- **Database and Search Engine Queries**: To perform the study, **searches were conducted** for articles based on specific keywords including "Business Intelligence tools in strategic decision making," "BI and organizational ambidexterity," "Business Intelligence; challenges and benefits," and "data-driven decision making." The following academic databases **were employed** to search for relevant articles: Google Scholar, IEEE Xplore, and JSTOR; industry reports **were obtained** from the publishers' websites and databases such as Statista and Gartner.

- **Inclusion and Exclusion Criteria**: The study **had clearly defined** inclusion and exclusion criteria to ensure only the right data **was used** in the study. To ensure the information **was up to date** and relevant, only sources published in the last 15 years **were used**, with an emphasis on cross-industry analysis, including finance, healthcare, and retail. Primary sources that **could provide** information on the use of BI in decision-making, organizational ambidexterity, and strategic alignment **were selected**.

- **Data Organization**: The collected data **was organized** according to the themes of the study to correspond with the research questions and objectives of the study. These **included** the strategic, tactical, and operational use of BI, the role of BI in organizational ambidexterity, and the issues with integrating BI.

Data Analysis - As this study **employed** secondary data, the data **was analyzed** using content analysis and thematic analysis. Quantitative and qualitative data collected **was subjected** to data analysis to assess BI's effects.

- **Content Analysis**: Numerical data (including adoption rates, decision-making results, and performance indicators) **was explored** using descriptive statistics to describe the situation. For instance, the frequency of BI usage across industries and the effects of BI on decision-making precision and timeliness **was presented** using tables, charts, and frequency distributions.

Thematic Analysis: To this end, qualitative data in the form of case studies and information from academic and industry reports **has been analyzed** using a thematic approach. To organize data, the analysis **involved** the use of thematic categorization of results into themes that **are relevant** to the research questions. Specific areas of focus **have included** the effects of BI tools on organizational ambidexterity, the synergies between BI and strategic planning, and issues related to tool integration and optimization.

Comparative Analysis: To achieve this, data **has been compared** across industries and organizational structures. This **enabled** the study to identify specific trends, issues, and opportunities in different sectors related to BI use and implementation, thus providing insights into how diverse organizational contexts **affect** the efficiency of BI in strategic decision-making.

Reliability and Validity

To this end, it **was essential** to establish the reliability and validity of the study's findings given the secondary nature of the data. To achieve this:

- **Source Credibility**: All information **was sourced** from scholarly articles and reputable industry reports to avoid outdated information.

- **Cross-Verification**: Information gathered from different sources **was checked** for validity and consistency to ensure accuracy. For example, conclusions drawn from research articles **were compared** with those from industry publications to confirm the effects of BI tools and the common challenges in their implementation.

- **Transparency in Data Selection**: The selection and classification of data **were conducted** in a clear and organized manner. The study **identified** all sources of data and **explained** the data collection process to ensure that only relevant data **was used** in the study.

Research Gap

Although there are a large number of studies on the effectiveness of Business Intelligence (BI) tools in the decision-making process of organizations and their potential uses, there are a number of research gaps that hinder the understanding of the strategic value of BI and how it can help organizations to achieve organizational ambidexterity and how the BI tools can be aligned with the organizational strategies. Current research mainly addresses the technological features of BI, including data and analytical functions, yet, there is a lack of research on how BI tools can enhance the ambidextrous management of exploration and exploitation, a key concept in adaptive contexts (Alshaar et al., 2023; O'Reilly & Tushman, 2013).

However, to the best of the authors' knowledge, there are few works that focus on discussing the BI integration issues and benefits in different sectors of the economy. This gap is rather problematic in terms of identifying the best practices of BI adoption, given the fact that organizations have different structures, data requirements, and strategic goals, depending on the sector they belong to, such as finance, healthcare, and retail (Mahmoudi, 2009; Golpaygani 2010). Despite the fact that the contextual factors have been identified to influence the effectiveness of BI in supporting strategic alignment and decision-making, there is limited research on how these factors differently impact BI's effectiveness.

Also, although the advantages of BI in strategic, tactical, and operational levels are well understood, limited research has been conducted on the challenges of finding the right balance between analytical decision making and instinct. This is especially so in strategic decision making where depending on data may hamper innovation and lack of data may lead to wrong decisions. It is therefore important to examine how such organisations can best manage these two approaches within their BI frameworks so that they can arrive at the right decisions at the right time.

Lastly, most current research focuses on the positive examples of BI adoption, but does not provide specific information on the integration issues that organizations may encounter, including data and application isolation, system compatibility issues, and limited resources. These challenges are important as they directly affect the quality and the relevance of insights generated through the use of BI, despite the fact that the literature offers limited guidance on how these challenges can be addressed in various types of organizations and operational environments (Howson, 2008; Beikzadeh & Eskandari, 2009).

This study, thus, aims at filling these research gaps by analyzing the cross-industry importance of BI in facilitating organizational ambidexterity, integrating BI with strategic plans, balancing analytical and heuristic decision making, and evaluating the integration issues and their solutions. In doing so, this research will help to fill the identified gaps and provide a better understanding of how BI can be best leveraged to assist organizations in a world that is becoming ever more reliant on data and thus more competitive.

Results

The findings of this research based on the secondary data from academic literature, industry reports, and case studies establish the following insights on the effects of BI tools on strategic decision-making, organizational ambidexterity, and integration challenges across industries. The findings of the research offer a more detailed understanding of how BI improves the decision-making process and strategic integration, as well as the difficulties organizations encounter when integrating these tools. Below is a summary of the findings categorized by the study's main themes:

1. The effects of BI on decision making accuracy and time

Research findings indicate that BI tools enhance both the accuracy and speed of decision-making at strategic and tactical levels. By providing real-time data access, predictive analytics, and data visualization, BI enables organizations to make informed decisions. Young Soo Park (2024) highlights that organizational culture plays a critical role in how BI tools improve information flow, which in turn enhances decision-making precision. His study suggests that structured data governance frameworks enable BI tools to function optimally, leading to more accurate and timely business decisions (Park, 2024).

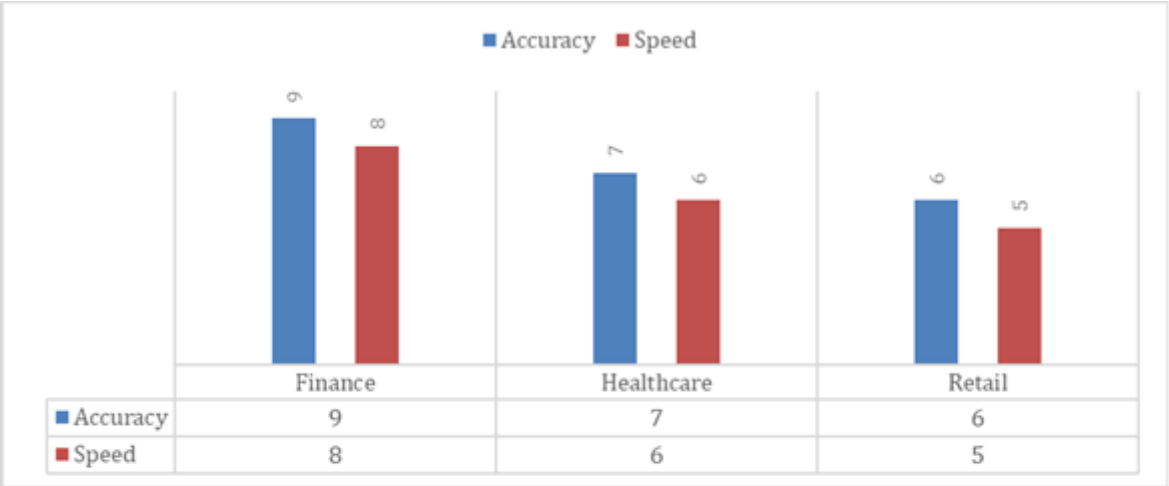

Figure 1: Effects of BI on Decision-Making Accuracy and Time (Score out of 10)

However, BI effectiveness varies across industries. The finance sector benefits from high decision-making accuracy due to structured data availability, while industries such as healthcare and retail face challenges in data integration from multiple sources, which may slow down decision-making processes. This implies that BI tools need to be designed with industry-specific data requirements in mind.

2. BI and Organizational Ambidexterity

The result of this study shows that BI is essential in facilitating organizational ambidexterity, the capability of an organization to explore new opportunities while exploiting current resources. The data from the consulting reports and academic literature shows that organizations using BI can attain this balance by using BI for market exploration while using the existing resources for market exploitation.

For example, a number of examples from technology and manufacturing companies show how BI helps leaders to understand new trends while optimizing their processes to maintain competitiveness. However, while BI tools offer useful information, they do not capture the creative and intuitive aspects of opportunity exploration, and thus organizations need to come up with frameworks to integrate data with strategic thinking. This finding is indicative of an important area where

support for BI implementation is needed, for instance, through the encouragement of an organizational culture that embraces both analytical thinking and imagination.

3. Issues in BI Integration and Optimization

Scientific literature highlights the role of BI in facilitating organizational ambidexterity—the ability to explore new opportunities while simultaneously exploiting existing resources. Findings from consulting reports and academic literature suggest that organizations leveraging BI can achieve this balance by using data for market exploration while optimizing current operations for efficiency.

A study by Prof. Dr. Fadheelah Salman Dawood(2024) examines how AI, as an extension of BI, contributes to ambidextrous performance in private banks. The research finds that AI-enhanced BI tools allow companies to identify emerging trends while streamlining current operations, thus supporting both innovation and efficiency (Dawood, 2024). However, while BI tools provide valuable insights, they do not fully capture the creative and intuitive aspects of strategic decision-making. This highlights the need for organizations to develop frameworks that integrate data-driven insights with executive intuition and strategic thinking.

According to the study, although BI is useful, organizations encounter several problems in implementing and enhancing these systems. Some of the challenges are; duplication of data, lack of integration between systems, and high resource consumption. Some of the issues that companies face includes data fragmentation, whereby the data is not well integrated across different business units, which hampers the efficiency of BI.

In fields like healthcare and retail, these integration problems are especially apparent because the data is difficult to integrate, for example, EHRs and consumer behavior data. Also, organizations usually do not have adequate technical knowledge and funds to enhance the utilization of BI systems, which results in suboptimal usage of BI and poor decision-making support. This finding underscores the need for the development of BI solutions that are easily scalable and have more efficient integration processes that are relevant to the various data environments of various industries.

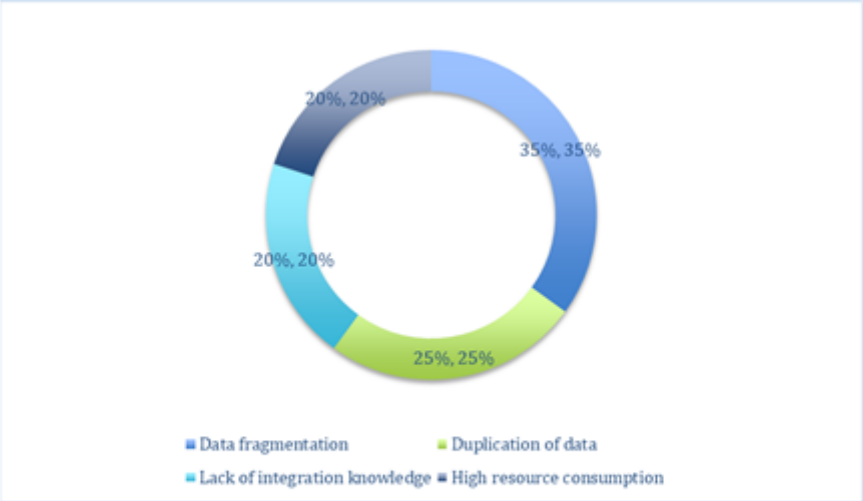

Figure 2: Key Challenges in BI Integration

4. The Problem of Rational Versus Emotional Approach to Decision Making

Despite its advantages, BI implementation poses several challenges, including data duplication, system integration issues, and high resource consumption. Many companies face difficulties in consolidating fragmented data across business units, particularly in industries like healthcare and retail, where disparate data sources (e.g., electronic health records and consumer behavior data) complicate integration efforts.

A study by Dr. Meera Sarma (2024) on Robotic Process Automation (RPA) and its impact on business efficiencies finds that automation technologies can enhance BI implementation by improving data accuracy and reducing processing time. Her research underscores the importance of automated data pipelines in overcoming integration challenges, particularly in industries dealing with large and unstructured datasets (Sarma, 2024).

Furthermore, organizations often lack the technical expertise and financial resources to optimize BI systems effectively. As a result, they fail to leverage the full potential of BI for strategic decision-making. These findings suggest the need for scalable, industry-specific BI solutions that address integration complexities while ensuring ease of use and adaptability.

Industry	BI Role	Maturity	Opportunities	Challenges
Finance	Compliance, data accuracy	High	Improved forecasting	Resource consumption
Healthcare	Predictive patient care	Medium	Patient data analysis	Privacy restrictions, integration
Retail	Customer analysis, inventory management	Medium	Personalization, demand forecasting	High transaction volume, real-time data

Table 1: BI Tools' Role Across Industries

On the other hand, those organizations that integrate BI with executive intuition are better placed to manage the dynamics of the market environment. For instance, the technology companies achieve the balance in using the BI tools to assist, not supplant, the leadership's intuition and experience, encouraging the decision-making culture based on the data and innovation. This result highlights the need for training and organizational structures that support the integration of the analytical and the intuitive systems in decision making. The findings also reveal a critical challenge in BI-driven decision-making: overreliance on data can sometimes suppress creativity and innovation. Industry reports and academic studies suggest that while BI enhances analytical decision-making, it does not capture the human judgment and intuition essential for strategic planning.

For instance, technology companies successfully balance data-driven decision-making with executive intuition by using BI as a supporting tool rather than a substitute for leadership experience. This approach ensures that BI tools enhance but do not override strategic insights. The findings suggest that organizations should focus on training and structural adjustments that encourage a harmonized decision-making culture, integrating both data analytics and executive judgment.

5. General Trends and Opportunities and Trends and Opportunities by Industry.

This paper examines the current state of BI across industries and identifies patterns and potential in the use of BI. In finance, for example, in industries where data governance and data standardization are critical, the BI implementation is more mature and closely aligned with data accuracy and compliance. Nevertheless, the healthcare sector is a very promising area for BI applications in the area of, for example, predictive patient care, but there are certain difficulties with integration because of the restrictions on data privacy and the lack of integrated systems.

BI is widely applied in the retail industry especially in customer analysis and inventory management; however, the real time data processing is a challenge due to the high volume of transactions. These are the implications of this study; it can be seen that BI is valuable in all industries but the effectiveness of BI tools is constrained by industry specific issues and needs meaning that there is a need for sector specific BI solutions which are capable of addressing specific data environments and operations.

This study provides strong evidence that BI tools play a crucial role in improving decision-making accuracy, facilitating organizational ambidexterity, and driving strategic growth across industries. By providing real-time data access, predictive analytics, and enhanced data visualization, BI enables organizations to make informed decisions that align with both short-term operational goals and long-term strategic objectives. However, despite its advantages, the full potential of BI remains constrained by several key challenges, including integration difficulties, excessive reliance on data analysis, and the need for industry-specific customization. These limitations highlight the necessity for organizations to adopt a more nuanced and adaptive approach to BI implementation.

One of the most significant recommendations from this study is the need for organizations to develop industry-specific BI solutions tailored to their unique data environments and operational needs. Since industries such as finance, healthcare, and retail operate within distinct regulatory frameworks and data structures, a one-size-fits-all BI system is unlikely to deliver optimal results. Instead, businesses should invest in BI tools that align with their sector's data governance requirements, ensuring seamless integration and effective utilization of insights. This industry-driven approach to BI customization can

significantly improve decision-making efficiency and data accuracy, ultimately leading to more strategic and actionable outcomes.

Another key consideration is the implementation of automated integration tools, such as Robotic Process Automation (RPA), to address data fragmentation challenges. Many organizations struggle with siloed data, where information is scattered across multiple systems, making it difficult to derive cohesive insights. By leveraging automation technologies, businesses can streamline data consolidation, improve interoperability between BI platforms, and reduce manual intervention in data processing. This, in turn, enhances the efficiency of BI systems, allowing organizations to extract real-time insights that support proactive decision-making and strategic agility.

Furthermore, while BI tools enhance analytical decision-making, organizations must strike a balance between rational data-driven insights and executive intuition to foster innovation and adaptability. Over-reliance on BI without incorporating human judgment can stifle creativity and limit an organization's ability to navigate dynamic market conditions. Successful companies, particularly in the technology and manufacturing sectors, effectively integrate BI insights with leadership experience, ensuring that data serves as a guiding tool rather than a rigid determinant of strategy. Cultivating a decision-making culture that embraces both data analytics and intuitive thinking can significantly enhance an organization's resilience and long-term competitiveness.

Adopting a holistic and adaptable approach to BI implementation is essential for maximizing the benefits of business intelligence while mitigating its limitations. By developing sector-specific BI solutions, integrating automated data management tools, and balancing data-driven insights with strategic intuition, organizations can unlock the full potential of BI and drive sustainable growth. As industries continue to evolve in an increasingly data-centric world, a well-executed BI strategy will remain a key determinant of competitive advantage and organizational success.

Discussion

This study provides strong evidence of the importance of Business Intelligence (BI) tools in changing the decision-making processes at various levels of an organization. The ability of BI to improve decision making, enable organizational ambidexterity and increase strategic alignment offer significant benefits for organizations that seek to operate effectively in a data driven business environment. However, the research also identifies several key issues that organizations need to overcome in order to gain the most from their investment in BI tools.

This paper supports the idea that BI tools greatly enhance decision-making acumen and speed by offering organizations actionable information and predictive analysis. This is consistent with previous studies that show that BI can turn data into information that can help organizations act proactively in volatile markets (Pérez-Campuzano et al., 2021; Alzghoul et al., 2022). BI is most helpful in supporting decisions that are strategic and operational because they require timely and correct information. Nonetheless, the extent to which BI tools help to improve decision accuracy differs across industries because of differences in data management and integration. For instance, the finance industry has well-organized and very much defined data and format while industries such as health care and retail face integration issues as data is often dispersed and not well organized. This means that organizations in industries that are not as defined by structure must put their resources into data integration and data management to be able to get the most out of BI tools in a structured data environment. The findings of the study are in line with the proposition that the effectiveness of BI tools in enhancing decision making is highly dependent on the quality and availability of the data used in the tools.

The study reveals that BI tools support organizational ambidexterity since they allow the organization to explore new markets while at the same time exploiting the current ones. This means that through the use of BI tools the organizations can engage in market exploration while at the same time enhancing their operational effectiveness. Such a capability of expanding the business operations while capitalizing on the existing resources is in tandem with the ambidexterity theory put forth by O'Reilly and Tushman (2013). Examples from the technology and manufacturing industries show that BI is vital for organizations to respond to market changes since BI data is used by executives to make changes to the organization's strategy and processes. Nevertheless, BI can enhance organizational ambidexterity but it is not a panacea that can help managers to identify new opportunities in a creative and intuitive way. The study indicates that organizations should also incorporate strategic thinking into BI to gain competitive advantage especially in industries that depend on innovation.

Nevertheless, the present study captures numerous issues in BI implementation and management within organizations. The foremost challenge is data dispersion in which different systems produce isolated pools of data that do not easily

communicate with other departments, thus restricting the effectiveness of BI. This specialization is most evident in industries like healthcare, where medical data, such as electronic health records, medical images, and patient profiles, are stored in separate systems and are not easily integrated. Also, most organizations lack the necessary resources, financial or otherwise, to maximize the benefits of BI. The results emphasize the need for creating reusable BI solutions and integration architectures that can be tailored to meet the needs of a particular organization and its data infrastructure. If these integration issues are not addressed, organizations may not fully leverage BI and therefore not get the needed information to support their decision making.

The results of the study also underline the need to consider both rational and heuristic decision-making strategies. Despite the fact that BI tools offer a wealth of data-driven information, it is possible that the reliance on quantitative analysis can be somewhat limiting, particularly during the strategic planning process. For instance, technology and creative industry sectors have been able to adopt BI as a complementary decision-making tool instead of relying on it. By recognizing executive intuition as important as BI insights these organizations can continue to make decisions that are not fully dictated by the data but are supported by it. This balance is especially important in sectors that require quick turnaround on strategy, because it avoids the kind of strategic ossification that can occur when strategy is overly formalized. The research provides a rationale for cultural and training changes that would enable organizations to adopt a more deliberative approach to decision making that incorporates BI with managerial intuition.

Comparing the results across industries, specific patterns and possibilities of BI implementation and application are identified. In the financial sector, which operates under strict regulatory requirements, BI is already deployed in its precise form. Nonetheless, in the healthcare industry, while BI offers great potential for predictive care and operational effectiveness, privacy rules and data silos pose major challenges to the integration of the technology. BI applications that support customer analytics and inventory management are useful in retail organizations, however, real time data analysis is problematic given the large number of transactions. These conclusions support the proposition that BI can bring value to all sectors, but its efficiency depends on the sector-specific legal, operational, and data constraints that demand the development of the sector-specific BI solutions.

In summary, this study shows that BI tools are helpful for improving the decision-making process, facilitating organizational ambidexterity, and reflecting strategic plans. Nevertheless, integration issues, the focus on analytical techniques, and requirements for the industry-specific BI solutions are the major obstacles to the complete BI optimization. To achieve the full potential of BI, organizations need to expend resources on versatile and coherent BI systems that address the organization's data and operational requirements and, at the same time, organizations should embrace both analytical reasoning and intuition in their decision making. These insights can help organizations that want to use BI to create strategic and operational advantages to do so more effectively, and thus become more agile, effective, and competitive in an increasingly data-driven world.

Conclusion

This research provides a strong foundation for future work on the use of BI tools in organizations to improve decision making at various levels of the organization, strategic management, and organizational ambidexterity. BI tools help organizations to make the right decision and in the right time, especially in the rapidly changing market environment. The features of BI such as real time analysis, predictive analysis and enhanced data visualization are crucial in view of the increasing use of data in decision making across most sectors.

However, the study also identifies a number of constraints that make it difficult to achieve the full benefits of BI tools. Some of these are the fragmentation of data, the inability of different systems to work in harmony, and the limited resources available especially for organizations operating in sectors with numerous data sources and regulated data such as health care and retail. These challenges underscore the importance of more effective, especially more scalable and more flexible BI solutions that can be adapted for particular industries and more efficient data management that minimizes data redundancies and enhances data integration.

However, BI supports decision making, there is a danger that organizations may overemphasize the use of numbers which may demote creativity and intuition. It is quite important for industries that require flexibility and innovation to find the right balance between analytical and heuristic decision-making. This research therefore suggests that organizations should encourage the use of BI tools that support both analytical thinking and strategic thinking in order to avoid making executives' intuition subordinate to the BI tools.

In sum, the research indicates that BI is not simply an IT application; it is a strategic weapon that, when integrated and used in conjunction with judgment, can greatly improve an organization's agility, effectiveness, and market position. As the discipline of BI grows, more studies on the use of BI in new industries, ways of integrating BI into the organization, and how to combine analytical and creative thinking in decision making will be important for organizations that want to excel in the new data age.

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