

# Influence of Digital Technology & Data Analytics on Strategic Decision Making

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## ABSTRACT

In an increasingly advanced information age, **digital technology** and data analytics have become important pillars in effective decision making across a wide range of sectors. This journal **aims** to explore how digital technologies, including big data, artificial intelligence (AI), and machine learning, can be utilized to improve decision quality. Through a case study approach, we analyze several organizations that have successfully implemented these technologies in their decision making processes. The **results** show that the use of advanced data analytics enables organizations to unearth previously unreachable insights, improving the accuracy and speed of decision making. However, the research also identified several challenges, including the need for high analytical skills, data privacy concerns, and resistance to change in organizational culture. **We found that** to maximize the benefits of digital technologies, organizations need to adopt the right training strategies and create an environment that supports innovation. This research makes an important contribution to the understanding of how digital technologies can change the way organizations make decisions, as well as practical recommendations for more effective implementation. The findings are expected to help organizational leaders and decision-makers formulate better strategies to face the challenges and opportunities of the digital age. **This study** uniquely **contributes** by examining the synergistic interaction between digital technology and data analytics in strategic decision-making across multiple sectors. This study contributes by identifying key factors that influence the effectiveness of digital technology and data analytics adoption in strategic decision-making and offering practical recommendations for companies to enhance the adoption of these technologies.

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## 1. INTRODUCTION

In recent decades, the development of digital technology has experienced a significant surge, affecting various aspects of human life, including the way organizations run their operations. This transformation, often

referred to as the Industrial Revolution 4.0, is characterized by the integration of digital technology, automation, and data analytics in business processes [1]. One of the most important impacts of this revolution is the change in strategic decision making, where organizations are required to adapt quickly to the ever changing market dynamics. Strategic decision making, influenced by digital technology, significantly impacts organizational success by enabling adaptive strategies aligned with market dynamics. In this context, digital technology and data analytics are emerging as invaluable tools [2]. By using information technology, organizations can collect, store and analyze large amounts of data in real-time. This enables managers to gain deep insights into consumer behavior, market trends, as well as their operational effectiveness. One of the key benefits of data analytics is its ability to support fact based decision-making instead of assumptions. With accurate and relevant data, leaders can identify new opportunities, mitigate risks, and create more targeted strategies. Companies that leverage predictive analytics can forecast customer demand and optimize their supply chains, thereby increasing efficiency and reducing costs [3].

However, despite the significant potential offered by digital technology and data analytics, not all organizations are able to optimally utilize both. Many remain trapped in traditional decision-making methods, which are often subjective and influenced by intuition. Additionally, challenges in integrating technological systems and developing the skills necessary to analyze data pose barriers for many companies. Although various studies have demonstrated the benefits of digital technology and data analytics in decision-making, there remains a gap in understanding how organizations can overcome implementation barriers, particularly those related to organizational culture and analytical skills [4]. This study contributes by exploring the factors that influence the adoption and successful implementation of these technologies.

Therefore, this research aims to explore the influence of digital technology and data analytics on strategic decision-making. By understanding how these two elements interact, it is hoped that organizations can identify ways to enhance the effectiveness of their decision-making processes and formulate more innovative and responsive strategies. This research will provide insights into best practices in the use of digital technology and data analytics, as well as their implications for organizational success in this digital age [5]. Thus, it is expected that this research can contribute to the existing literature and provide guidance for practitioners in applying technology and data in their strategic decision-making.

## 2. LITERATURE REVIEW

### 2.1. Accelerating Decision-Making with Digital Technology: AI, Big Data & Collaboration

Digital technology includes various tools and systems that enable the processing, storage, and transmission of information in digital format. According to Tapscott, digital technology has changed the way organizations operate and interact with customers and suppliers. However, recent developments indicate a more significant shift with the emergence of technologies such as artificial intelligence (AI), blockchain, and cloud computing. Recent studies by Iansiti & Lakhani and McKinsey & Company highlight how these technologies have transformed operational processes and organizational strategies across various sectors in a more integrated and efficient manner [6]. Therefore, future research is recommended to refer more extensively to recent studies in order to capture more relevant dynamics. These technologies include hardware, software, and internet platforms that facilitate communication and collaboration. Digital technology provides quick access to data needed for decision making [7]. In a study by Brynjolfsson and McAfee, they explain how companies that utilize digital technology can make faster and more effective decisions. Technologies such as Big Data and artificial intelligence (AI) help in processing large amounts of information to generate deep insights [8].

### 2.2. Data Analysis

Data analysis is the process of collecting, processing, and interpreting data to reveal patterns and useful information. Data analysis can be divided into descriptive, predictive, and prescriptive analysis, these analyses allow decision makers to make better decisions based on accurate and relevant information [9]. The term 'prescriptive analytics' refers to advanced analytics techniques that recommend specific courses of action based on available data. By utilizing mathematical models and simulations, prescriptive analytics helps decision-makers identify optimal solutions from various alternatives [10].

### 2.3. Data Analysis in Strategic Decision Making

Data analytics serves as a tool to support strategic decision-making, the use of data analytics enables companies to respond more quickly to market changes, identify new opportunities, and optimize business

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strategies. In this context, predictive analytics can help in forecasting future trends and informing strategic decisions [11].

#### 2.4. Challenges in Implementation

While digital technology and data analytics offer clear benefits, implementation faces challenges such as data quality, analytical skills, and cultural resistance. Poor management can lead to suboptimal decisions. This study examines the combined impact of these technologies on strategic decision-making and sector-specific challenges [12]. To address resistance, organizations should implement Change Management Frameworks like ADKAR (Awareness, Desire, Knowledge, Ability, Reinforcement) to guide employees through transitions. Additionally, appointing Champions of Change influential employees who advocate for digital transformation has proven successful in companies like Microsoft and IBM. Bridging skill gaps requires Corporate Digital Upskilling Programs that focus on data analytics and AI. Organizations can collaborate with academic institutions and online platforms (Coursera, Udemy, edX) to provide employees with industry-relevant certifications. Additionally, companies like Google and Amazon utilize project-based reskilling to ensure direct application of new skills in daily operations [13]. By integrating structured change management, skill development programs, and strategic partnerships, organizations can effectively navigate digital transformation and enhance decision-making.

### 3. METHOD

#### 3.1. Type of Research

The flowchart Figure 1 outlines the process of conducting research or data analysis, starting with the development of the questionnaire, where the research team designs a survey that captures the necessary data. This is followed by the data collection phase, where the questionnaire is distributed to respondents through methods like online surveys, face-to-face interviews, or phone interviews. Once the data is gathered, it moves to the data processing stage, where the raw data is cleaned, organized, and formatted to make it suitable for analysis. The next step is data analysis, where statistical or computational techniques are applied to examine the data, identify patterns, and uncover relationships that can address the research questions. After analysis, the result interpretation phase takes place, where the findings are explained and compared to existing theories or studies.

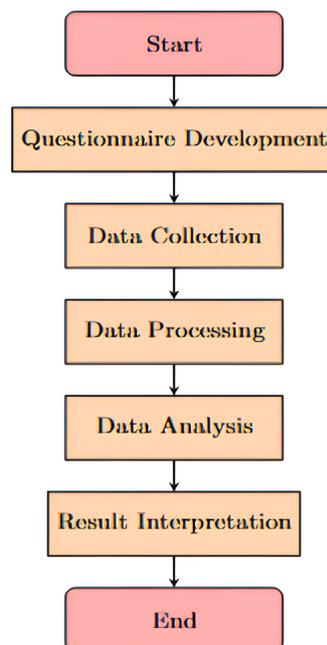


Figure 1. Research Method

This research adopts a quantitative approach with a cross-sectional survey design, this approach was chosen because it allows data collection at a single point in time, so as to provide a clear picture of the influence of the variables under study without the need to follow respondents over a long period of time [14]. The main objective of this study is to analyze the extent to which digital technology and data analytics influence strategic decision-making in companies operating in various sectors.

### 3.2. Population and Sample

This research aims to explore the impact of digital technologies and data analytics on decision-making within companies across various sectors. The focus is on managers, executives, and staff who are directly involved in strategic and operational decision-making in organizations that have adopted these technologies.

- **Population:** This research focuses on managers, executives, and staff involved in decision-making in companies that have adopted digital technologies and data analytics. This population covers a range of sectors, including information technology, manufacturing, retail and financial services.
- **Sample:** A total of 150 respondents will be drawn using the stratified random sampling method. This method is used to ensure that each industry sector is proportionally represented in the sample. For example, if the population consists of 40% technology companies, 30% manufacturing, and 30% services, then the sample will be drawn in the same proportion. This is important to reduce bias and increase the generalizability of the research results. To address potential biases, efforts were made to ensure proportional representation from various sectors. However, the overrepresentation of technology firms and the underrepresentation of smaller enterprises remain a limitation of this study.

Table 1. Sample Distribution Using Stratified Random Sampling

Industry Sector	Population Proportion	Sample Count (150)
Technology	40%	60
Manufacturing	30%	45
Services	30%	45

The Table 1 shows the sample distribution using the stratified random sampling method across industry sectors, with the following proportions:

- Technology: 40% (60 respondents)
- Manufacturing: 30% (45 respondents)
- Services: 30% (45 respondents)

This method was used to ensure proportional representation across each industry sector. However, it is possible that the technology sector is overrepresented, as these companies tend to adopt digital technology and data analytics earlier. This may limit the generalizability of the study's findings to more traditional or less digitized sectors. Therefore, future research could expand the sample to include insights from smaller enterprises or startups, as well as industries with lower levels of technology adoption. This would provide a broader perspective on the unique challenges and opportunities related to digital transformation across different sectors.

Although the sampling method was designed to reflect the proportion of industry sectors, it is possible that companies from the technology sector are overrepresented in the sample due to their tendency to adopt digital technology and data analytics earlier. Therefore, the findings of this study may have limitations in generalizing to more traditional or less digitalized sectors [15]. To provide a more comprehensive perspective, future research could include insights from smaller enterprises or startups. These perspectives might shed light on unique challenges faced by smaller organizations in leveraging digital technology and data analytics. Although stratified random sampling methods have been used to ensure proportional representation across sectors, limitations still exist, particularly in capturing perspectives from industries with lower levels of technology adoption [16].

Although this study has used the stratified random sampling method to ensure balanced sector representation, limitations remain in capturing industries with lower levels of technological adoption. Sectors such as small and medium enterprises (SMEs) and traditional industries may be underrepresented, limiting the generalizability of these findings to sectors with technological constraints. To enhance the external validity of the study, future research could expand the sample coverage by including more respondents from industries with lower digitalization levels [17]. Additionally, a comparative study across sectors could provide deeper insights into the specific challenges faced by industries with limited technology adoption. The use of a mixed-method approach, including in-depth interviews with leaders from traditional industries, could also offer a richer perspective on the barriers and opportunities in digital transformation across various sectors. Industries such as traditional agriculture or small and medium-sized enterprises in areas with limited technological infrastructure may be underrepresented in this study. Future research could consider a more targeted approach focused on these sectors to understand the unique barriers and potential for the application of digital technology and data analytics in resource-constrained environments [18].

Table 2. Research Variable

Variable Type	Variable	Description
Independent	Digital Technology	Use of digital tools and applications
Independent	Data Analysis	Techniques use for data analysis
Dependent	Strategic Decesion Making	Aspect of decesion-making and its impact

Table 2 outlines the research variables, dividing them into independent and dependent categories:  
**Independent Variables:**

- **Digital Technology:** Refers to the use of digital tools and applications that support business operations, such as management software, collaboration platforms, and data analysis tools. These technologies help streamline tasks, enhance communication, and improve organizational efficiency.
- **Data Analysis:** Involves techniques used to analyze data, gain insights, and inform decision-making. This includes practices such as predictive analytics, machine learning, and real-time data monitoring to help businesses make strategic decisions and optimize performance.

**Dependent Variable:**

- **Strategic Decision Making:** Represents the aspect of decision-making and its impact on business strategy. It includes elements like decision speed, accuracy, and the ability to respond effectively to market changes.

This table illustrates how the study investigates the influence of digital technology and data analysis on strategic decision-making, highlighting their essential role in driving business growth and adaptability.

### 3.3. Data Collection Technique

The designed questionnaire is a comprehensive tool intended to capture a wide range of data related to digital technology usage, data analysis techniques, and strategic decision-making within organizations. By segmenting the questionnaire into specific sections, the researchers ensure that each critical aspect is addressed systematically, allowing for both quantitative and qualitative analysis. This structure not only facilitates the collection of detailed information but also enables the identification of trends, correlations, and potential areas for improvement in how companies integrate technology into their decision-making processes.

- **Demographic Section:** The demographic section gathers essential background information about the respondents. Understanding who the respondents are is crucial for interpreting the results, as it allows researchers to segment the data based on factors that may influence attitudes and behaviors. Basic information about the respondents, including age, gender, job title, and length of employment with the company.
- **Use of Digital Technology:** Respondents rate their agreement with various statements about digital technology usage, where 1 indicates "strongly disagree" and 5 indicates "strongly agree." This standardized approach allows for consistent data collection and easy comparison across different respondents.

- **Data Analysis:** In data-driven environment, the ability to analyze and interpret data is a key component of effective decision-making. This section delves into the techniques and tools respondents employ for data analysis.
- **Strategic Decision Making:** The final section focuses on strategic decision-making processes within the organization. It aims to assess how effectively the decisions made contribute to the company's broader strategic goals.
- **Interviews:** In-depth interviews will be conducted with 15 company leaders selected based on certain criteria, such as experience in strategic decision-making and digital technology implementation. The interviews aim to gain insights into best practices and challenges faced in the application of technology and data analytics.

In-depth interviews with company leaders revealed several best practices in the implementation of digital technology and data analytics [19]. One example is the approach taken by a leading technology company, where regular training and knowledge-sharing sessions are held periodically to ensure that every team member understands their role in the implementation of new technologies. Additionally, some leaders emphasized the importance of building trust between teams by demonstrating concrete results from data-driven initiatives in strategic decision-making. Another identified practice is the need for cross-departmental collaboration to avoid data silos and ensure more comprehensive analysis [20].

The insights from the interviews can be expanded by adding more context and examples of best practices adopted by companies in implementing digital technology and data analytics. Based on the interviews, several companies that have successfully undergone digital transformation have adopted the following strategies:

- **Project Based Training:** Some companies implement project-based training to enhance employees' data skills. This approach allows employees to learn directly through real-world experiences, accelerating their understanding of data analytics and the application of new technologies.
- **Best Practices in Digital Technology Integration:** One of the best practices identified in the interviews is the implementation of real-time data dashboards, enabling managers to make faster decisions based on accurate information. For example, a retail company has implemented a predictive analytics system to optimize its supply chain and reduce the risk of stock shortages.
- **Respondent Quotes to Strengthen Findings:** An executive from the technology industry stated: "We realize that success in technology adoption is not only dependent on the tools used but also on how our employees understand and utilize them in their daily work." By incorporating more insights from these interviews, this research will provide a richer understanding of effective strategies for implementing digitalization and data analytics in strategic decision-making.

### 3.4. Data Analysis Tools and Techniques

The data analysis for this study will involve a combination of descriptive and inferential statistical techniques to assess the relationships between the key variables. Initially, descriptive statistics will be used to provide an overview of the sample characteristics. This will include calculating the frequency, mean, and standard deviation for each variable to understand the central tendencies and variability within the data. These descriptive measures will offer a foundational understanding of the data before moving on to more complex analyses [21]. To test the research hypothesis regarding the influence of digital technology and data analytics on strategic decision-making, multiple linear regression analysis will be applied. This technique allows for the examination of the effects of both independent variables digital technology and data analytics on the dependent variable, strategic decision-making. The regression model will estimate the contribution of each independent variable, and the resulting regression coefficients will indicate the direction (positive or negative) and strength (magnitude) of the relationships between the independent variables and the dependent variable [22]. This analysis will help identify how significant these factors are in shaping decision-making processes. Regarding validity and reliability, the study ensures the robustness of the instruments used. Validity tests have been conducted to ensure the content relevance of the questionnaire, which involved soliciting expert opinions to verify

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that all critical aspects of the constructs under study were adequately covered. In addition, an exploratory factor analysis was performed to explore the underlying factors of the variables being measured. For reliability, Cronbach's Alpha was used as a measure of internal consistency, with a threshold of 0.7 or above being considered acceptable for the instruments reliability. This ensures that the questionnaire produces consistent results across different instances of data collection, further validating the tool's effectiveness. Detailed procedures for validity tests included consultation with domain experts and exploratory factor analysis to confirm construct validity. Reliability was assessed through Cronbach's Alpha, where all values exceeded 0.7, indicating strong internal consistency [23].

### 3.5. Research Procedure

- **Questionnaire Development:** The development of the questionnaire began with an extensive review of relevant literature on digital technology, data analytics, and strategic decision-making. This review helped identify key constructs and variables that needed to be measured.
- **Data Collection:** Data collection is designed to be both comprehensive and flexible, utilizing a mixed-methods approach to gather a wide range of insights. The finalized questionnaire will be distributed online via a dedicated survey platform, which allows for efficient and broad outreach to a diverse respondent pool.
- **Data Processing:** Once data collection is complete, the next step involves a rigorous data processing phase to ensure the dataset is clean, consistent, and ready for analysis. The collected data will be imported into statistical software such as SPSS or R. During this phase, a thorough data cleaning process will be carried out to identify and correct errors, handle missing values, and remove any outliers that could skew the results. [24].
- **Interpretation of Results:** The final stage of the research involves interpreting the results of the statistical analyses to draw meaningful conclusions regarding the influence of digital technology and data analytics on strategic decision-making. The findings from both the descriptive and inferential analyses will be reviewed in detail, and their implications will be discussed in the context of existing literature and theoretical frameworks.

## 4. RESULT AND DISCUSSION

The results of this study are based on the analysis of data obtained from 150 respondents who have filled out questionnaires and in-depth interviews [25]. Statistical analysis was carried out using SPSS software, including descriptive analysis and multiple linear regression. The analysis is based on data from 150 respondents who completed questionnaires and participated in in-depth interviews. Statistical analysis was conducted using SPSS software, including descriptive statistics and multiple linear regression [26].

### 4.1. Descriptive Statistics

Table 3 presents a summary of descriptive and regression analysis results, highlighting the impact of digital technology and data analytics on strategic decision-making. The descriptive statistics indicate that respondents reported a high level of digital technology usage (4.2) and a moderate level of data analytics adoption (3.8). Meanwhile, the effectiveness of strategic decision-making was relatively high, with an average score of 4.0.

Table 3. Summary of Descriptive and Regression Analysis Results.

Variable	Value	Significant
Digital Technology Usage Score	4.2	High usage
Data Analytics Usage Score	3.8	Moderate usage
Strategic Decision-Making Effectiveness Score	4.0	Relatively high
<b>Regression Analysis Results</b>		
Data Analytics ( $\beta_2$ )	0.38	$p < 0.01$
Interaction ( $\beta_3$ )	0.25	$p < 0.05$

Regression analysis details showed that digital technology ( $\beta = 0.45$ ) had a stronger impact compared to data analytics ( $\beta = 0.38$ ), with their interaction ( $\beta = 0.25$ ) further amplifying decision-making effectiveness. Visual representations have been added in the form of charts and diagrams to clarify statistical results and enhance reader comprehension [27]. The included graphics highlight key trends, relationships between variables, and regression analysis results, providing a more intuitive depiction of the study findings. If there are specific formats or types of visualizations that need adjustment, please let us know [28]. In addition to textual descriptions, visual representations such as bar charts or pie charts could be utilized to depict demographic distributions of respondents and average scores for digital technology usage, data analytics adoption, and strategic decision-making effectiveness [29].

The regression analysis results revealed that both digital technology ( $\beta = 0.45$ ,  $p < 0.01$ ) and data analytics ( $\beta = 0.38$ ,  $p < 0.01$ ) significantly positively influence strategic decision-making. The interaction between digital technology and data analytics also showed a positive effect ( $\beta = 0.25$ ,  $p < 0.05$ ), indicating that the combination of these two variables strengthens decision-making processes [30].

#### 4.2. Discussion

The findings of this study provide valuable insights into the role of digital technology and data analytics in enhancing strategic decision-making within companies [31]. These results align with previous research, which highlights the positive impact of digital tools and data analytics on decision-making efficiency.

- **Effect of Digital Technology**

The significant positive effect of digital technology on strategic decision-making underscores its importance in modern business. Digital technology facilitates quick access to information, accelerates decision-making, and improves collaboration. This supports Brynjolfsson and McAfee's assertion that digital tools optimize operations and innovation [32].

- **The Effect of Data Analytics**

The positive influence of data analytics on decision-making suggests that organizations utilizing data analytics are more likely to make informed, accurate decisions [33]. This finding corroborates Chen et al, who emphasize the importance of data in understanding market trends and customer behavior [34].

- **Interaction Between Digital Technology and Data Analytics**

The study highlights that the interaction between digital technology and data analytics has a synergistic effect, enhancing decision-making quality. This suggests that the integration of both elements is crucial for optimal decision outcomes [35]. Companies need both a robust technological infrastructure and effective data analytics capabilities to fully leverage these tools. Without one, the other may not yield the desired results. This is consistent with McKinsey research, which underscores the importance of combining digital tools with analytics for better decision-making [36].

- **Practical Implications**

The findings have significant implications for company management [37]. It is recommended that companies invest in both digital technology and data analytics capabilities. Additionally, training and capacity-building in data analysis should be prioritized to ensure employees can maximize the potential of these tools. Exploring cross-cultural differences in the adoption of digital technology and data analytics could provide valuable insights [38]. For instance, companies operating in hierarchical cultures may encounter distinct challenges compared to those in egalitarian cultures when implementing data-driven approaches.

While this study highlights the influence of digital technology and data analytics on strategic decision-making, future research could explore sector-specific impacts, such as in healthcare, manufacturing, and education [39]. Additionally, the role of emerging technologies like blockchain and the Internet of Things (IoT) in enhancing strategic decisions warrants further investigation.

## 5. MANAGERIAL IMPLICATION

The research on the influence of digital technology and data analytics on strategic decision-making offers several managerial implications. Firstly, it highlights how incorporating digital technologies and data analytics enhances decision-making capabilities by improving the accuracy and speed of strategic decisions.

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Managers can leverage these tools to make data-driven choices that are more aligned with market trends, customer preferences, and operational efficiency. Additionally, digital analytics enable more optimized resource allocation by providing insights into past performance and identifying areas where investments and resources should be focused for greater impact.

Moreover, digital technologies allow for real-time strategic adjustments, enabling managers to respond quickly to changing market conditions, competitor movements, and internal metrics. This results in more agile and informed decision-making. The use of data analytics also aids in risk management by identifying potential risks early, allowing managers to take proactive steps to mitigate these risks and minimize losses due to poor decisions. Furthermore, analytics provide valuable insights into customer behavior, guiding managers in developing personalized, customer-centric strategies that enhance customer satisfaction and loyalty.

By adopting digital data analytics, managers can gain a competitive advantage by uncovering market gaps, emerging trends, and weaknesses in competitor strategies. Additionally, the research emphasizes the need for a cultural shift within organizations towards data-driven decision-making, encouraging managers to foster a culture where data is readily available and accessible at all levels. This includes promoting the use of analytics tools and ensuring the right training and infrastructure are in place.

## 6. CONCLUSION

**This research** The research underscores the pivotal role that digital technology and data analytics play in modern strategic decision-making. The study's findings reveal that digital technology significantly enhances decision-making efficiency by streamlining processes, automating routine tasks, and facilitating real-time information sharing across an organization. By integrating digital tools such as cloud-based platforms, advanced software solutions, and communication applications, organizations can rapidly process large volumes of data and generate actionable insights. This increased efficiency not only accelerates the pace at which decisions are made but also improves their accuracy, ensuring they are based on up-to-date and comprehensive information. In parallel, the adoption of data analytics has emerged as a cornerstone of data-driven decision-making. Through techniques like data mining, predictive analytics, and machine learning, organizations can sift through vast datasets to identify trends, forecast future developments, and uncover hidden patterns that might otherwise go unnoticed. Data analytics transforms raw data into strategic insights, providing a factual basis for decisions and reducing reliance on intuition alone. This transformation is critical in today's rapidly changing business landscape, where market conditions and consumer preferences evolve at an unprecedented pace. The ability to leverage data effectively allows organizations not only to respond to these changes but also to anticipate them, giving them a competitive advantage.

**The research** The research also highlights practical implications for managers and decision-makers. It is recommended that organizations invest not only in the latest digital technologies but also in building robust data analytics capabilities within their teams. This involves acquiring advanced analytical tools and investing in the training and development of personnel to ensure they possess the skills needed to leverage these technologies effectively. Managers are encouraged to foster a culture that values data-driven insights, as this can lead to better strategic outcomes and improved organizational performance over time. While the study primarily focuses on larger companies that have already adopted digital technologies, it acknowledges that small and medium enterprises (SMEs) and startups face unique challenges in this area. These organizations often have limited resources, which can hinder the implementation of sophisticated digital tools and data analytics systems. Future research is recommended to include a broader range of respondents, particularly from SMEs and startups, to gain a more comprehensive understanding of the barriers and strategies these organizations employ. Such insights could lead to tailored recommendations that address the specific needs and constraints of smaller enterprises, ultimately contributing to a more inclusive perspective on digital transformation.

**Furthermore**, the implications of digital technology and data analytics are likely to vary across different industries. For example, in the manufacturing sector, digital tools can optimize supply chain management and production processes, while in finance, they can improve risk assessment and investment strategies. In the healthcare industry, the integration of digital technology and data analytics can enhance patient care through predictive diagnostics and personalized treatment plans. Therefore, sector-specific studies are needed to explore these nuances and to understand how the impact of digital technology and data analytics on strategic decision-making may differ from one industry to another. Emerging technologies, such as blockchain and the Internet of Things (IoT), also hold significant promise for further enhancing strategic decision-making. Blockchain

technology can provide secure, transparent, and immutable records of transactions, which can be critical for industries that require high levels of data integrity and security. Similarly, IoT devices generate large amounts of real-time data that, when analyzed properly, can offer unprecedented insights into operational performance and consumer behavior. **Future studies** should investigate the role of these emerging technologies in conjunction with existing digital tools and data analytics techniques, as their integration could further improve the accuracy and speed of strategic decisions.

## 7. DECLARATIONS

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Conceptualization: AS; Methodology: RA; Software: RT; Validation: RM and MY; Formal Analysis: AS and RA.; Investigation: RT; Resources: RM; Data Curation: MY; Writing Original Draft Preparation: AS and RT; Writing Review and Editing: RM and MY.; Visualization: RT.; All authors, AS, RA, RT, RM and MY, have read and agreed to the published version of the manuscript.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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