

Analyzing the Role of Big Data Analytics in Shaping Evidence-Based Entrepreneurial Strategies and Competitive Advantage

Dr. Jainish Roy^{1*}, Dr. Rajesh Sehgal²

^{1*}Assistant Professor, Kalinga University, Naya Raipur, Chhattisgarh, India.
ku.jainishroy@kalingauniversity.ac.in, <https://orcid.org/0009-0003-7116-9137>

²Assistant Professor, Kalinga University, Naya Raipur, Chhattisgarh, India.
ku.rajeshseghal@kalingauniversity.ac.in, <https://orcid.org/0009-0002-0344-403X>

Received: 18 December, 2025; Revised: 12 January 2026; Accepted: 20 February 2026; Published: 30 March 2026

Abstract

The emergence of digital data has changed the decision-making process in entrepreneurship by enabling entrepreneurs to apply big data analytics to business decisions. Although there is increased use of analytics technologies in firms, many entrepreneurial firms base their decision-making on intuition. The current study explores the impact of big data analytics on evidence-based entrepreneurship strategy and competitive advantage. This study uses an interpretivist research philosophy and utilizes a qualitative research methodology where multiple case studies have been employed as a research method. Semi-structured interviews have been used to collect primary data from 22 participants, including founders and owners of startups and SMEs, innovation managers, and entrepreneurial consultants from different industries such as technology, e-commerce, FinTech, healthcare, and retail. Secondary data from industry reports and company websites complemented primary data. Five key themes were found from the analysis. Opportunity identification via analytics was mentioned by 19 respondents (86.4%) and was the most frequent theme. Strategic planning based on evidence was mentioned by 18 respondents (81.8%), highlighting the growing use of analytics in decision-making. Customer-oriented innovation was noted by 17 respondents (77.3%), and competitive advantage through predictive intelligence was stressed by 16 respondents (72.7%). Difficulties in implementing analytics, such as a lack of expertise, high costs, and data issues, were reported by 14 respondents (63.6%). It can be concluded that analytics capabilities foster entrepreneurship and help in developing better strategic plans and innovative ideas. The use of big data analytics is a strategic capability that enables evidence-based decision-making in entrepreneurship and provides competitive advantages. Analytics helps an organization recognize opportunities and be more proactive in responding to market changes. This research adds qualitative information to entrepreneurship literature and provides insights for entrepreneurs interested in data-driven business strategies.

Keywords

Big Data Analytics, Evidence-Based Decision-Making, Entrepreneurial Strategy, Competitive Advantage, Innovation Capability, SMEs, Data-Driven Entrepreneurship.

1. Introduction

The fast pace of development of digital technologies has changed the environment of entrepreneurship, making it possible for companies to use their data as a means to facilitate growth and innovation. Digital transformation has led to the use of data-based methods and has helped entrepreneurs to make decisions based on the available real-time information about the market instead of acting on their intuition or experience alone (Mikalef et al., 2019; Tsiu et al., 2025). In such an environment, big data analysis has proved to be a very

effective instrument that can analyze huge amounts of structured and unstructured data collected through customers, social networks, digital interactions, and transactions. As markets are becoming more dynamic and unpredictable, evidence-based decision-making becomes an important factor in successful business operation and strategic planning (Pattnaik & Shah, 2023; Akter et al., 2021).

Even with the increasing advancement of analytical technology and techniques, many entrepreneurial decisions are made more out of intuition, subjective judgment, and experience. Though intuitive thinking and other aspects mentioned above play an important role in entrepreneurship, the overdependence on them can result in flawed evaluations of the market situation and ineffective resource utilization. Even though the value of big data analytics in terms of its benefits has been recognized in earlier research, the problem of the practical application of analytical findings remains poorly understood. It is especially topical for start-ups and SMEs.

In previous studies about big data analytics, the focus was mainly on large enterprises with technologically sophisticated infrastructures and separate data science divisions. There is an absence of empirical research that sheds light on the process by which entrepreneurship and SMEs apply analytics for strategic decision-making and competitive advantage. This gap in existing literature is addressed in the current study, where the goal is to analyze the way in which entrepreneurs use big data analytics in their strategic decisions and how they benefit from analytics in gaining a competitive advantage. Therefore, the study is trying to answer the questions about how entrepreneurs use analytics in their strategic decision-making and what benefits are achieved by doing so.

The structure of the paper is as follows. Section II presents a literature survey on big data Analytics, entrepreneurship decision making, Innovation and Competitive Advantage, section III explains how the analytical capability influence strategic decision-making, innovation and competitiveness, Section IV present research methodology, which includes Interpretivist Paradigm, Research Philosophy, Research Approach, Sampling Design, Case study Design, Data Collection Methods and analysis procedure section. V explains result and analysis in term of Identified Themes and frequency table section. VI discusses and analyses the finding with the support of dynamic capabilities Theory and existing Literature, lastly, Section VII presents the conclusions where key findings, contribution, Practical implications, limitation and recommendations for the future research.

2. Literature Review

The analytics of big data has come to be seen as an indispensable facilitator of decision-making and innovation for entrepreneurs in increasingly digitized business environments. Big data is being utilized in significant quantities by organizations to achieve valuable insights that can help in strategic planning and response to market needs. It was proposed in the study that the use of big data analytics adds strategic value to the business through improved organization intelligence and evidence-based decision-making Grover et al., (2018). In the same way, it was stated that the use of insights gained through analytics helps entrepreneurs recognize opportunities through trends and requirements of customers and markets that may go unnoticed (Sedkaoui, 2018). For SMEs, the use of analytics has gained significance in market and customer intelligence (Omowole et al., 2024).

There has been much academic work on the impact of analytics capabilities on organizational performance. It was discovered that analytics capabilities lead to better innovation performance due to the formation of dynamic capabilities, whereas analytics-enabled adaptation leads to competitive advantage owing to organizational flexibility (Shan et al., 2019; Wang et al., 2019). The use of analytics in the creation of data-driven cultures that contribute to innovation and performance has also been discussed in the literature (Chaudhuri et al., 2024; Karaboga et al., 2023; Verma et al., 2021). Moreover, analytics-enabled decision-making facilitates knowledge absorption and strategic effectiveness by reducing uncertainty (Wang & Byrd, 2017; Kirola et al., 2023).

In terms of competitiveness, companies that use analytics effectively are successful by predictive intelligence, efficiency, and agility (Herden, 2020; Medeiros & Maçada, 2022). The capacity to convert data into knowledge helps businesses to adapt promptly to any change within their environment and clients' requirements (Mikalef & Krogstie, 2020; Wang et al., 2018). Yet, problems like cost of implementation, talent shortage, and issues with data management still remain (Amankwah-Amoah & Adomako, 2019; Singh et al., 2022)

Research already proves that big data analytics fosters innovation, strategic thinking, and competitive performance. But most of them focus on big companies and use quantitative measures, thus leaving room for further qualitative research on how entrepreneurs and SMEs apply analytics to craft evidence-based strategies.

3. Conceptual Framework

The theoretical framework in this research shows how BDAC affects the success of entrepreneurship via a series of strategic and innovative processes. As competition becomes greater and data more abundant in the business environment, it is essential for entrepreneurs to base their decisions not on their intuition but rather on the right information. BDAC means the capacity of an organization to get, process, analyze, and interpret large amounts of data and use its knowledge to make conclusions and decisions. This is what forms the basis of evidence-based strategic decisions and helps entrepreneurs to identify opportunities, evaluate risks, and use resources efficiently.

The theory suggests that strong analytical capabilities improve the quality of evidence-based strategic decisions by providing entrepreneurs with reliable information on trends, preferences, competitors' activities, and the business's performance. Thus, evidence-based decisions enable organizations to respond to changes more quickly and develop strategies aligned with customers' requirements and business objectives.

Strategic decisions based on evidence stimulate further entrepreneurial innovations. Insights gained from data allow entrepreneurs to recognize customer needs, come up with innovative products and services, improve the business model, and discover new market opportunities. Innovation becomes an essential channel through which the knowledge gained analytically becomes a tangible value for a company.

The framework finally implies that entrepreneurial innovation plays an important role in gaining a competitive advantage. Companies that use analytics and innovation effectively can have greater market responsiveness, higher levels of customer satisfaction, operational efficiency, and strategic agility than their competitors. Competitive advantages become an important part of business sustainability and performance.

Besides the main connections, there are four additional factors that make the framework work effectively. Market intelligence helps entrepreneurs to know about industry trends and competitor activities. Customer analytics provides more information about customer needs and behaviors. Predictive insights help in forecasting and decision-making, and operational efficiency increases the effective use of resources.

Fig. 1 portrays the manner in which big data analytic scalabilities and resources function as base inputs providing organizations the means to form its core dynamic capabilities-recognize opportunities, pursue the sensed insights and reconfiguration resources-which enable them to operationalize evidence based entrepreneurship strategies like identifying and exploiting entrepreneurial opportunities, strategic business plan development, innovative and creative ways to serve customers, or predictive information systems. Ultimately this translates into higher quality decision making, enhance productivity and process efficiency, achieve sustainable competitive advantage, and boost overall business performance. The relations are mediated by: managerial know-how, financial capabilities, technological maturity, the quality of the data, intensity of rivalry, and the state of the environment. The loop encourages Organizational Learning and the ability for Continuous Improvement of business performance.

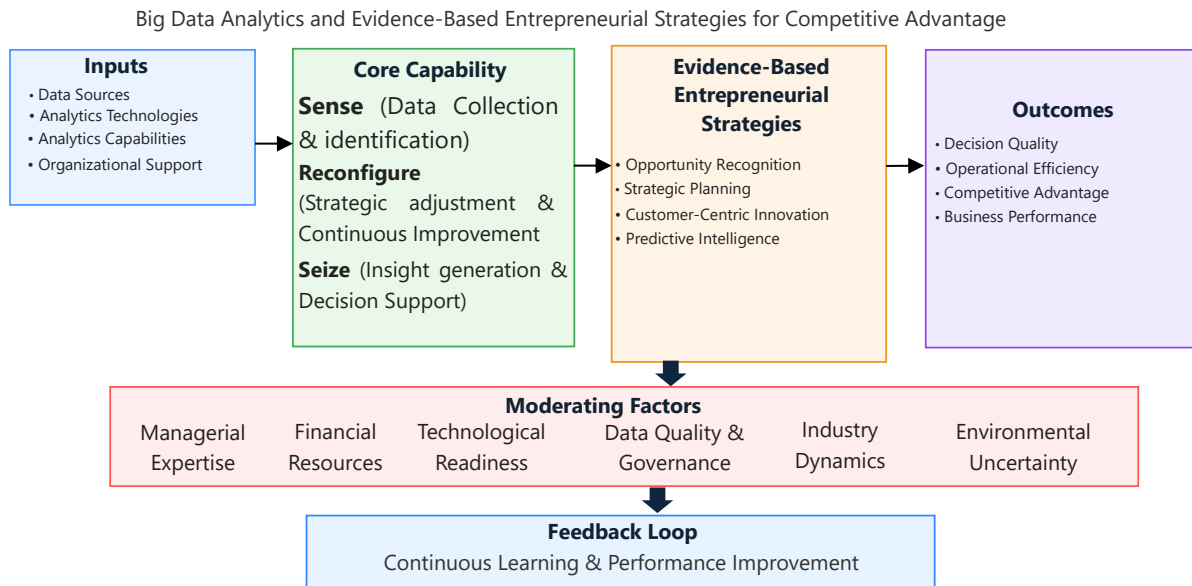


Fig. 1: Conceptual framework of big data analytics-driven evidence-based entrepreneurial strategies for competitive advantage

4. Research Methodology

Research Philosophy

This research employs an interpretivist research philosophy to investigate how entrepreneurs view and apply big data analytics in formulating strategies that create competitive advantages. An interpretivist philosophy is appropriate since it seeks to comprehend the meaning, experience, and perspectives of people in their own context. Unlike a positivist research paradigm that tries to measure variables objectively and formulate generalizable laws, an interpretivist philosophy tries to understand the subjective realities created by the people themselves through their experiences. Given that the decision-making process in entrepreneurship entails subjective judgment and contextual analysis, an interpretivist philosophy is helpful in understanding the interpretation of insights from analytics and integration into the strategic formulation process.

Research Design

The research on big data analytics in entrepreneurship was conducted using a qualitative multiple-case design. Such an approach facilitated the comparison between cases and gave an exhaustive knowledge of the similarities and specific characteristics of the studied phenomena. In total, 10 entrepreneurial businesses (within the desired number of 8–12 cases) engaged in technology, e-commerce, FinTech, healthcare, and retail were analyzed. They were chosen based on the presence of extensive use of digital technologies and data-based business strategies.

As part of gaining multiple insights into the phenomenon within a single case, 22 interviews with the participants from 10 ventures were carried out. Among them there were startup founders, small and medium enterprise owners, innovation managers and entrepreneurial consultants who contributed to planning and analytics-based decision making. Conducting interviews with more than one participant from several businesses provided deeper insight due to the possibility of triangulation and avoiding the dependency on the opinion of one person.

Sampling Strategy

Purposive sampling was used for recruitment in the research where rich data subjects were sought out with rich entrepreneurial decision-making experience involving big data analytics. The final sample size included 22

participants, who were selected from 10 entrepreneurial ventures. These ventures included startups, SMEs, innovation managers, and entrepreneurial consultants. They comprised the sectors of technology, e-commerce, FinTech, healthcare, and retail. Using several participants from different entrepreneurial ventures helped increase the reliability of the research due to its data triangulation capability.

Data Collection

The primary data is gathered by conducting semi-structured interviews. This ensures that there is sufficient flexibility in terms of gathering participant experience while at the same time maintaining the consistency in interviews. The estimated duration of each interview is around 45-60 minutes, and the interview can be carried out either face-to-face or using virtual means of communication. Some of the sample interview questions included: "How do you use data for strategic planning in your organization?" "How important is the use of analytics in exploring business opportunities?" and "In what ways has the use of analytics enhanced your competitive advantage?"

For greater triangulation of data, the study uses not only primary data but also secondary data. Secondary data are obtained from corporate reports, business websites, and publications related to the industry and technology. The use of secondary data increases the validity of results.

Data Analysis

The collected data are analyzed using thematic analysis. This form of analysis is commonly used in qualitative research to identify, organize, and interpret patterns in textual data. Thematic analysis starts with data familiarization through reading of the interviews several times in order to develop an understanding of the participants' perspectives. Open coding is carried out as the second step, where the statements and concepts that stand out are coded. At the third step, similar codes are categorized to form themes. Theme review is the fourth stage, whereby the themes are assessed and refined. At the fifth stage, definition and labeling of themes take place. The interpretation stage follows the development of themes as it involves relating the developed themes to literature and theories.

Trustworthiness of the Study

In order to ensure that the quality of qualitative results remains rigorous, some trustworthiness standards are used. Credibility is improved by carrying out member checking, whereby the participants are able to verify the interpretations of their answers. Dependability is ensured through keeping an audit trail, which can document all the steps of the process of gathering and analyzing data. Transferability is assured through giving detailed descriptions of the contexts of the organizations, industries, and entrepreneurship environments in which the participants operate. This enables the readers to judge whether the findings can be transferred to other contexts.

5. Findings and Analysis

Analysis of interviews held with entrepreneurs, founders of startups, SME owners, innovation managers, and entrepreneurial consultants resulted in identifying five main themes explaining the role of analytics for an evidence-based entrepreneurial approach and competitive advantage. The identified themes reflect not only the strategic importance of using analytics for opportunity identification, decision-making, innovation, and competitive positioning but also difficulties related to its implementation.

Theme 1: Analytics-Driven Opportunity Recognition

Emerging Insights

A major theme that emerged in all the interviews is that of the use of big data analytics in finding opportunities in the market before other competitors. The interviewees explained that the analytics tools allowed them to

keep track of the behavior of the customers, industry changes, and digital behavior in real-time through the help of visualization dashboards and market intelligence systems.

The second important insight from the interviewees was related to the use of analytics in forecasting customer demand. The participants mentioned the use of historical sales data, internet searches, and customer feedback in forecasting future demands.

Some of the interviewees also pointed out that using analytics for finding opportunities helped them identify the niches in the market.

Theme 2: Evidence-Based Strategic Planning

Findings

The respondents repeatedly pointed to the value of analytics in assisting evidence-based strategic planning. The use of gut feeling gave way to analysis in decision-making processes for entrepreneurs. Data-driven decision-making was viewed by respondents as a tool to decrease uncertainty and increase the organization's confidence in the assessment of business opportunities.

Analytical tools allowed the respondents to analyze the current state of the market, consumer behavior, and performance of their organizations based on objective data. Thus, entrepreneurs could make decisions related to pricing, marketing, product development, and other aspects of operations.

Better investment decision-making became another important advantage of analytics usage. Entrepreneurs analyzed scenarios of return on investment and evaluated financial risks and priorities of strategic initiatives. Consequently, organizations gained the ability to better allocate their resources.

Theme 3: Customer-Centric Innovation

Findings

According to the findings from the interviews conducted, it is evident that big data analytics is central to customer-based innovation. The participants noted that insights gathered using analytics enable companies to know the changing customer expectations and how best to create products based on their market demands.

One of the most important observations from the findings was the capacity of analytics to facilitate the personalization of products. Using customer behavior and buying data, entrepreneurs would be able to customize their products or services to match the customers' needs.

Service improvement was another important aspect of analytics application, as noted by the participants in the interviews. The use of data allowed firms to enhance customer experience and improve the process of delivering services.

Theme 4: Competitive Advantage through Predictive Intelligence

Findings

The other type of intelligence, which became one of the sources of competitive advantage among the entrepreneurial firms, was that of predictive intelligence. The participants used predictive analytics to foresee market shifts, forecast the needs of customers, and detect possible threats to the business. This ability allowed firms to react faster to the changes occurring in the market environment.

Faster reaction to changes in the market was another advantage named by entrepreneurs as a result of the use of analytics. They stated that with the help of predictive analytics, they managed to launch products faster, adjust prices, and seize new opportunities before their competitors.

Another valuable discovery was that entrepreneurs were using digital analytics to monitor competitors' actions. Through this activity, they managed to benchmark themselves against the competitors.

Theme 5: Challenges in Analytics Adoption

Findings

In spite of the large number of advantages of analytics, there are certain barriers that prevent proper implementation. The first problem is the lack of skilled personnel who are capable of using analytics. It was found out that some small and medium-sized companies and start-ups do not have data analysts, which complicates the process of using the appropriate technologies.

The issue of high costs was also raised by many participants in the research. According to their opinion, purchasing an analytics platform, maintaining the digital environment, and employing skilled specialists is expensive. These expenses can be quite a burden for an entrepreneur.

Another serious problem is data quality issues. People pointed out the problem of the lack of proper data that may distort the outcomes of analytics and influence the decision-making process negatively.

Overall, the research reveals that big data analytics serves as a strategic capability tool for enhancing entrepreneurial opportunity identification, providing evidence-based strategic planning, facilitating customer-focused innovations, and building competitive advantage. However, the success of implementing big data analytics relies on addressing problems associated with analytical skills, resources, and the quality of data management.

Summary of Theme Frequency

The thematic analysis revealed five main themes indicating the role of big data analytics in developing entrepreneurial strategy and competitive advantage. The frequency of discussion of these themes by the participants is provided in Table 1 below. Although the research uses a qualitative methodology, discussing theme frequencies offers further insight into their prominence among participants.

Table 1: Frequency of major themes identified from interviews (N = 22)

Theme	Participants Mentioning Theme (n)	Percentage (%)
Analytics-Driven Opportunity Recognition	19	86.4
Evidence-Based Strategic Planning	18	81.8
Customer-Centric Innovation	17	77.3
Competitive Advantage through Predictive Intelligence	16	72.7
Challenges in Analytics Adoption	14	63.6

Fig. 2 shows the percentage and frequency distribution of participants mentioning each of the five main themes found in the thematic analysis. Analytics driven opportunity generation and strategy based upon evidence is considered to be the most significant benefit big data analytics may offer in entrepreneurship.

The findings reveal that the most common theme that emerged was that of analytics-led opportunity identification, which was cited by 19 out of 22 respondents (86.4%). The importance of analytics in recognizing emerging trends in the market as well as predicting the needs of customers was stressed. Evidence-based strategic planning became another relevant issue as it was pointed out by 18 respondents (81.8%). It is worth noting that the role of data-driven decision-making in addressing uncertainties and making wise investments has become increasingly apparent. The theme of customer-centric innovation was mentioned by 17 respondents (77.3%), and they all stated that analytics made it possible to personalize products and improve services. The last theme to be considered was the competitive advantage through predictive intelligence, which was raised by 16 respondents (72.7%).

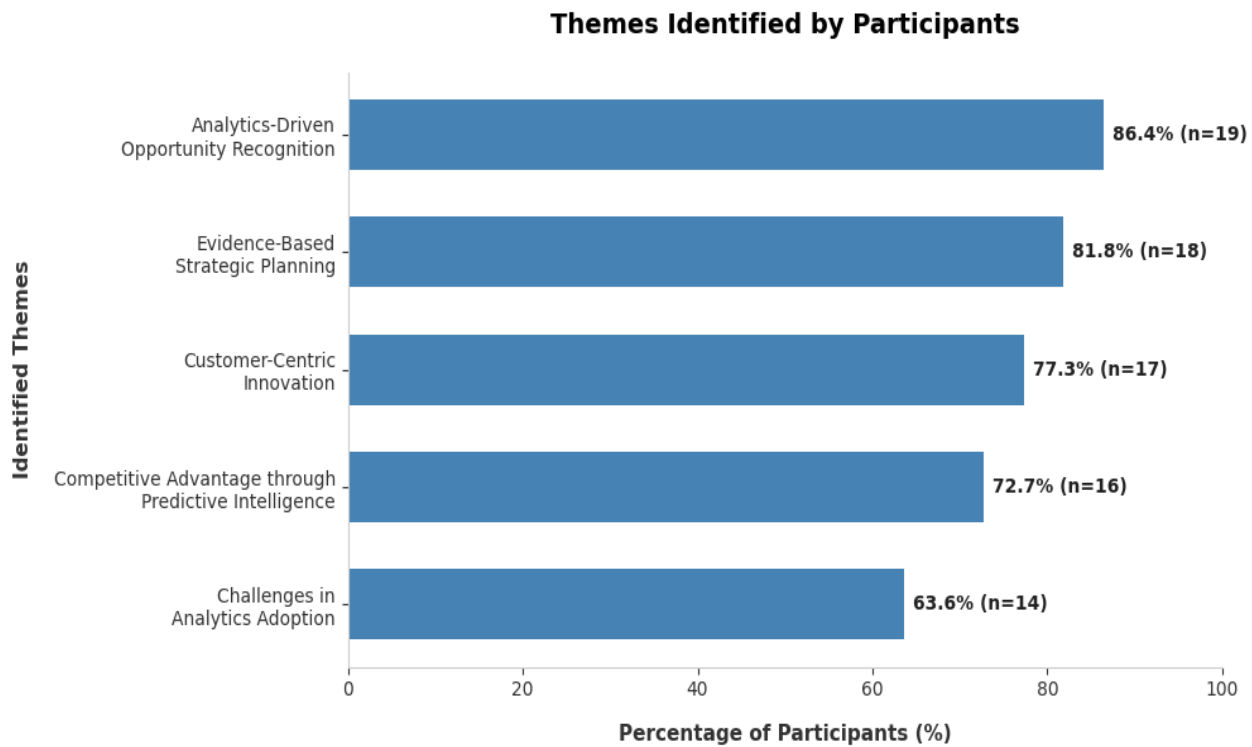


Fig. 2: Frequency of key themes identified in big data analytics-driven entrepreneurial strategy

6. Discussion

From the results of this study, it is clear that big data analytics is quite an important concept when it comes to helping entrepreneurs recognize and capitalize on entrepreneurial opportunities, making strategic decisions, and innovating. Just like previous research on the topic shows, analytics allows entrepreneurs to recognize the market dynamics, customer preferences, and new opportunities better than their intuitive counterparts. Previous literature on the topic highlighted the importance of having data that is up-to-date and relevant for successful market sensing and the detection of entrepreneurship opportunities. In addition to that, the results of this study add qualitative proof to this idea, showing that entrepreneurs use analytics to predict customer demand and respond to changes in business environments.

Moreover, these results can be explained by the Dynamic Capability Theory, according to which organizations can enjoy their continued success by means of opportunity sensing, opportunity exploitation through strategic activities, and constant resource reconfiguration under changing environmental conditions. Big data analytics capability has been identified as an essential dynamic capability, which provides for collecting, analyzing, and transforming data into meaningful knowledge by entrepreneurial organizations. This capability gives organizations the ability to adapt promptly to changes in the market, become strategically flexible, and enhance innovation performance. In addition, the study identifies that evidence-based decision-making leads to better-quality decision-making since uncertainty is reduced and subjective opinions are minimized. The participants stated that using data analysis makes it possible to have more precise resource allocation, investment assessment, and strategic planning.

In addition, the results indicate that the competitive advantage gained through the use of analytics is made possible through market responsiveness, innovation, and prediction. Companies that are able to incorporate analytics in their processes are in a position to predict what customers want, keep tabs on their competitors, and come up with innovations faster than their competitors. Even though there are challenges like a lack of skills, high cost of implementation, and data quality issues, turning data into insights gives an organization a sustainable competitive advantage.

7. Conclusion

The current research is focused on the investigation of the impact of big data analytics on the development of evidence-based business strategies for entrepreneurs and SMEs. The research method used was a qualitative multiple case study where data were collected through interviews with 22 respondents engaged in such industries as technology, e-commerce, FinTech, healthcare, and retail. It was found that big data analytics is no longer limited to the technological field but is becoming a powerful strategic tool helping entrepreneurs identify opportunities, make decisions, innovate, and grow their businesses. Five thematic categories explaining the strategic value of analytics were identified in the course of the study. Analytics-driven opportunity identification became the most often mentioned theme – 19 out of 22 respondents (86.4%). Use of evidence-based strategic planning was mentioned by 18 participants (81.8%), showing the importance of data-driven information for uncertainty reduction and making more informed decisions and investments. The idea of customer-centric innovation was stated by 17 participants (77.3%), revealing the connection between analytics and the personalization of products and services. Moreover, predictive intelligence was mentioned by 16 participants (72.7%) as an instrument for creating competitive advantage due to increased market responsiveness and competitor monitoring. At the same time, 14 participants (63.6%) reported some obstacles to adopting analytics due to a skill gap, high costs of implementation, and poor quality of data. The study makes a contribution to entrepreneurship studies as it shows that the capability of analytics is a dynamic organizational resource that increases the flexibility and competitiveness of the firm. The results of the study reveal that entrepreneurial companies that successfully utilize analytics in decision-making processes have better chances of surviving in an ever-changing market environment. Further research in the field might be conducted using longitudinal and mixed methods for evaluating the long-run effect of analytics capabilities on entrepreneurship success. Moreover, future research might explore the issues of artificial intelligence integration into analytics practice and industry-related analytics.

References

- [1] Akter, S., Hossain, M. A., Lu, Q., & Shams, S. R. (2021). Big data-driven strategic orientation in international marketing. *International Marketing Review*, 38(5), 927-947. <https://doi.org/10.1108/IMR-11-2020-0256>
- [2] Amankwah-Amoah, J., & Adomako, S. (2019). Big data analytics and business failures in data-Rich environments: An organizing framework. *Computers in Industry*, 105, 204-212. <https://doi.org/10.1016/j.compind.2018.12.015>
- [3] Chaudhuri, R., Chatterjee, S., Vrontis, D., & Thrassou, A. (2024). Adoption of robust business analytics for product innovation and organizational performance: the mediating role of organizational data-driven culture. *Annals of Operations Research*, 339(3), 1757-1791. <https://doi.org/10.1007/s10479-021-04407-3>
- [4] Grover, V., Chiang, R. H., Liang, T. P., & Zhang, D. (2018). Creating strategic business value from big data analytics: A research framework. *Journal of management information systems*, 35(2), 388-423. <https://doi.org/10.1080/07421222.2018.1451951>
- [5] Herden, T. T. (2020). Explaining the competitive advantage generated from Analytics with the knowledge-based view: the example of Logistics and Supply Chain Management. *Business Research*, 13(1), 163-214. <https://doi.org/10.1007/s40685-019-00104-x>
- [6] Karaboga, T., Zehir, C., Tatoglu, E., Karaboga, H. A., & Bouguerra, A. (2023). Big data analytics management capability and firm performance: the mediating role of data-driven culture. *Review of managerial science*, 17(8), 2655-2684. <https://doi.org/10.1007/s11846-022-00596-8>
- [7] Kirola, M., Memoria, M., Shuaib, M., Joshi, K., Alam, S., & Alshanketi, F. (2023, February). A referenced framework on new challenges and cutting-edge research trends for big-data processing using machine learning approaches. In *2023 international conference on smart computing and application (ICSCA)* (pp. 1-5). IEEE. <https://doi.org/10.1109/ICSCA57840.2023.10087686>

- [8] Medeiros, M. M. D., & Maçada, A. C. G. (2022). Competitive advantage of data-driven analytical capabilities: the role of big data visualization and of organizational agility. *Management Decision*, 60(4), 953-975. <https://doi.org/10.1108/MD-12-2020-1681>
- [9] Mikalef, P., & Krogstie, J. (2020). Examining the interplay between big data analytics and contextual factors in driving process innovation capabilities. *European Journal of Information Systems*, 29(3), 260-287. <https://doi.org/10.1080/0960085X.2020.1740618>
- [10] Mikalef, P., Boura, M., Lekakos, G., & Krogstie, J. (2019). Big data analytics capabilities and innovation: the mediating role of dynamic capabilities and moderating effect of the environment. *British journal of management*, 30(2), 272-298. <https://doi.org/10.1111/1467-8551.12343>
- [11] Omowole, B. M., Olufemi-Philips, A. Q., Ofadile, O. C., Eyo-Udo, N. L., & Ewim, S. E. (2024). Big data for SMEs: A review of utilization strategies for market analysis and customer insight. *International Journal of Frontline Research in Multidisciplinary Studies*, 5(1), 001-018. <https://doi.org/10.56781/ijsrms.2024.5.2.0044>
- [12] Pattnaik, M., & Shah, T. R. (2023, July). Role of big data to boost corporate decision making. In *2023 2nd international conference on edge computing and applications (ICECAA)* (pp. 105-111). IEEE. <https://doi.org/10.1109/ICECAA58104.2023.10212179>
- [13] Sedkaoui, S. (2018). How data analytics is changing entrepreneurial opportunities? *International Journal of Innovation Science*, 10(2), 274-294. <https://doi.org/10.1108/IJIS-09-2017-0092>
- [14] Shan, S., Luo, Y., Zhou, Y., & Wei, Y. (2019). Big data analysis adaptation and enterprises' competitive advantages: the perspective of dynamic capability and resource-based theories. *Technology Analysis & Strategic Management*, 31(4), 406-420. <https://doi.org/10.1080/09537325.2018.1516866>
- [15] Singh, R., Sharma, P., Foropon, C., & Belal, H. M. (2022). The role of big data and predictive analytics in the employee retention: a resource-based view. *International Journal of Manpower*, 43(2), 411-447. <https://doi.org/10.1108/IJM-03-2021-0197>
- [16] Tsiu, S. V., Ngoben, M., Mathabela, L., & Thango, B. (2025). Applications and competitive advantages of data mining and business intelligence in SMEs performance: A systematic review. *Businesses*, 5(2), 1-49. <https://doi.org/10.3390/businesses5020022>
- [17] Verma, S., Singh, V., & Bhattacharyya, S. S. (2021). Do big data-driven HR practices improve HR service quality and innovation competency of SMEs. *International Journal of Organizational Analysis*, 29(4), 950-973. <https://doi.org/10.1108/IJOA-04-2020-2128>
- [18] Wang, Y., & Byrd, T. A. (2017). Business analytics-enabled decision-making effectiveness through knowledge absorptive capacity in health care. *Journal of Knowledge Management*, 21(3), 517-539. <https://doi.org/10.1108/JKM-08-2015-0301>
- [19] Wang, Y., Kung, L., Gupta, S., & Ozdemir, S. (2019). Leveraging big data analytics to improve quality of care in healthcare organizations: A configurational perspective. *British Journal of Management*, 30(2), 362-388. <https://doi.org/10.1111/1467-8551.12332>
- [20] Wang, Y., Kung, L., Wang, W. Y. C., & Cegielski, C. G. (2018). An integrated big data analytics-enabled transformation model: Application to health care. *Information & Management*, 55(1), 64-79. <https://doi.org/10.1016/j.im.2017.04.001>