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Unlocking competitive advantage in emerging markets through advanced business analytics frameworks

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Abstract

This paper explores the transformative potential of advanced business analytics frameworks in unlocking competitive advantages for businesses operating in emerging markets. It begins by highlighting the significant benefits of advanced analytics tools and techniques, such as predictive and prescriptive analytics, big data, and machine learning, in understanding market trends, consumer behavior, and operational efficiency. Despite these benefits, businesses in emerging markets face substantial challenges, including inadequate technological infrastructure, a shortage of skilled professionals, high implementation costs, and data quality issues. The paper outlines the key implications for businesses seeking to gain a competitive edge, emphasizing the importance of agility, customer-centric strategies, and operational efficiencies. It then provides strategic recommendations for effectively implementing advanced business analytics frameworks, including investing in technological infrastructure, building a skilled workforce, improving data quality and accessibility, adopting scalable solutions, focusing on data privacy and security, leveraging AI and machine learning, embracing edge computing and IoT, and fostering a culture of innovation. By addressing these challenges and following these recommendations, businesses can harness the power of advanced analytics to achieve sustainable growth and maintain a competitive advantage in the dynamic environments of emerging markets.

Keywords: Advanced business analytics; Emerging markets; Competitive advantage; Predictive analytics; Operational efficiency; Data-driven strategies

1. Introduction

Emerging markets, characterized by rapid industrialization and economic growth, have become pivotal in the global economic landscape. Countries like China, India, Brazil, and South Africa exemplify the transformative potential of these markets (Cavusgil, 2021). They offer vast opportunities due to their large populations, increasing consumer bases, and burgeoning middle classes. As these economies continue to develop, they present significant prospects for businesses seeking expansion and growth. However, the dynamic nature of emerging markets also poses unique challenges, including regulatory complexities, volatile economic conditions, and cultural differences that require careful navigation. To harness the potential of these markets, businesses must adopt innovative strategies that can adapt to and capitalize on the fast-paced changes occurring within them (Gereffi, 2019).

In emerging markets, achieving and sustaining a competitive advantage is crucial for business success. Competitive advantage allows firms to differentiate themselves from rivals, capture market share, and achieve superior profitability.

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This is particularly important in emerging markets, where competition is fierce and constantly evolving. Companies that can establish a strong foothold early on can benefit from first-mover advantages, such as brand recognition and customer loyalty. Moreover, a well-defined competitive advantage helps businesses to navigate the uncertainties and risks inherent in these markets. By leveraging unique strengths and capabilities, companies can better position themselves to respond to market demands, withstand economic fluctuations, and capitalize on growth opportunities. Thus, the quest for competitive advantage in emerging markets is not just about survival but thriving in an environment ripe with potential (Jerab & Mabrouk, 2023).

Advanced business analytics has emerged as a powerful tool for gaining a competitive advantage, particularly in emerging markets and complex and rapidly changing environments. Business analytics involves the use of data, statistical analysis, and modeling techniques to understand and improve business performance (Omar, Minoufekr, & Plapper, 2019). Advanced analytics goes a step further by incorporating sophisticated techniques such as machine learning, predictive analytics, and big data analysis. These tools enable companies to gain deeper insights into market trends, consumer behavior, and operational efficiency. In emerging markets, where data can be vast and unstructured, advanced analytics helps to make sense of this information, uncovering patterns and opportunities that might otherwise go unnoticed. By leveraging these insights, businesses can make informed decisions, optimize strategies, and proactively address challenges (Hamadaqa et al., 2024). For instance, predictive analytics can help companies anticipate market shifts and consumer preferences, allowing them to stay ahead of the competition. Similarly, big data analytics can enhance supply chain efficiency, reducing costs and improving service delivery. In essence, advanced business analytics provides the actionable intelligence needed to unlock competitive advantage in emerging markets (Paramesha, Rane, & Rane, 2024).

The primary objective of this paper is to explore how advanced business analytics frameworks can be utilized to unlock competitive advantage in emerging markets. This exploration will include a detailed examination of the theoretical foundations of business analytics, the specific tools and techniques that comprise advanced analytics, and the unique benefits these frameworks offer in emerging markets. Additionally, the paper will address the challenges businesses face when implementing these frameworks and provide strategic recommendations for overcoming these obstacles. The scope of the paper is comprehensive yet focused. It encompasses an analysis of the various aspects of business analytics, from basic data analysis to advanced predictive and prescriptive techniques. The paper will highlight the transformative potential of these technologies in driving business success in emerging markets. By thoroughly understanding the role of advanced business analytics in competitive strategy, this paper aims to equip business leaders and strategists with the knowledge and insights to effectively leverage these tools in emerging markets.

2. Theoretical Foundations

2.1. Overview of Business Analytics

Business analytics is a transformative field that combines data analysis, statistical methods, and information technology to provide actionable insights for decision-making and strategic planning. Its origins lie in the increasing availability of data and advancements in computing power, which have enabled organizations to harness vast amounts of information to drive performance improvements (Adeniran, Efunniyi, Osundare, Abhulimen, & OneAdvanced, 2024). At its core, business analytics involves the systematic exploration of an organization's data with a focus on statistical analysis, predictive modeling, and data-driven decision-making. It encompasses various methods, from descriptive analytics, which summarizes historical data, to more sophisticated techniques, such as predictive and prescriptive analytics, which forecast future trends and recommend actions to achieve desired outcomes. The evolution of business analytics has empowered organizations to make more informed decisions, optimize operations, enhance customer experiences, and ultimately gain a competitive edge in the market (Adewusi et al., 2024).

2.2. Key Theories and Models Relevant to Competitive Advantage

Several key theories and models underpin the use of business analytics in achieving competitive advantage. One fundamental concept is Michael Porter's Competitive Forces Model, which outlines five forces that shape industry competition: the threat of new entrants, the bargaining power of suppliers, the bargaining power of buyers, the threat of substitute products or services, and the intensity of competitive rivalry. Businesses can identify strategic opportunities and threats by analyzing these forces, allowing them to position themselves advantageously within their industry (Kamran, 2020).

Another crucial model is the firm's resource-based view (RBV), which emphasizes the importance of internal resources and capabilities in achieving sustainable competitive advantage. According to RBV, firms can gain a competitive edge by

developing and leveraging unique resources that are valuable, rare, inimitable, and non-substitutable. Business analytics can be seen as a strategic resource that fits these criteria, providing firms with unique insights and capabilities that are difficult for competitors to replicate (Assensoh-Kodua, 2019).

The Value Chain Analysis model, also developed by Michael Porter, highlights how firms can create value through their primary and support activities. By analyzing each activity's contribution to the overall value creation process, businesses can identify areas for improvement and optimization. Business analytics plays a crucial role in this process by providing the data and insights needed to enhance efficiency and effectiveness across the value chain (Jones, Demirkaya, & Bethmann, 2019).

2.3. Application of These Theories in Emerging Markets

The application of these theories in emerging markets is particularly pertinent due to these regions' unique characteristics and dynamics. Emerging markets are characterized by rapid economic growth, evolving consumer preferences, and often volatile business environments. The Competitive Forces Model can help firms navigate these complexities by providing a structured approach to analyzing market conditions and identifying strategic opportunities. For example, businesses can use analytics to assess the threat of new entrants and develop strategies to strengthen their market position, such as enhancing customer loyalty or innovating product offerings (El Nemar, El-Chaarani, Dandachi, & Castellano, 2022).

The Resource-Based View is also highly relevant in emerging markets, where firms often face resource constraints and must maximize the value of their existing assets. By leveraging business analytics, companies can optimize their resource allocation, identify inefficiencies, and develop capabilities that provide a competitive advantage. For instance, predictive analytics can help firms anticipate market trends and allocate resources more effectively, while prescriptive analytics can guide decision-making in pricing, marketing, and supply chain management (Zahra, 2021).

Value Chain Analysis is particularly useful in emerging markets, where businesses often encounter operational challenges and inefficiencies. By applying business analytics to value chain activities, firms can identify bottlenecks, reduce costs, and improve overall performance. For example, analytics can be used to optimize inventory management, streamline production processes, and enhance customer service, all of which contribute to creating a more competitive and resilient business (Fernandez-Stark & Gereffi, 2019).

Integrating business analytics frameworks with competitive strategies is essential for firms looking to thrive in emerging markets. This integration involves aligning analytics capabilities with the organization's overall strategic goals, ensuring that data-driven insights are effectively translated into actionable strategies. One approach to achieving this integration is developing a robust analytics infrastructure that supports data collection, analysis, and dissemination across the organization. This infrastructure should include advanced analytics tools, skilled personnel, and a data-driven culture that values evidence-based decision-making (Omar et al., 2019).

Another critical aspect of integration is the use of analytics to support strategic planning and execution. For instance, firms can use analytics to conduct market segmentation and identify high-potential customer segments, develop targeted marketing campaigns, and optimize pricing strategies. By continuously monitoring and analyzing market data, businesses can adapt their strategies in real-time to respond to changing market conditions and emerging opportunities (France & Ghose, 2019).

Moreover, integrating business analytics with competitive strategies requires a focus on innovation and continuous improvement. Firms should leverage analytics to identify emerging trends and disruptive technologies, allowing them to stay ahead of the competition and capitalize on new opportunities. This proactive approach can involve investing in research and development, exploring new business models, and fostering a culture of innovation that encourages experimentation and risk-taking (Adewusi et al., 2024).

3. Advanced Business Analytics Frameworks

3.1. Description of Advanced Business Analytics Tools and Techniques

Advanced business analytics encompasses a wide array of tools and techniques designed to derive meaningful insights from complex and voluminous data. These tools range from basic data mining and statistical analysis to sophisticated machine learning algorithms and artificial intelligence (AI). At the core of advanced analytics are several key techniques (Bedi, Goyal, & Kumar, 2020):

- **Predictive Analytics:** This technique uses historical data to predict future outcomes. Predictive models, often powered by machine learning algorithms, analyze patterns in data to forecast trends, customer behaviors, and potential risks.
- **Prescriptive Analytics:** Going beyond prediction, prescriptive analytics suggests possible courses of action and likely outcomes. It uses optimization and simulation algorithms to recommend decisions that can achieve specific business objectives.
- **Big Data Analytics:** This involves processing and analyzing large datasets that are too complex for traditional data-processing tools. Big data analytics leverages distributed computing frameworks like Hadoop and Spark to manage and analyze data across multiple servers, enabling real-time insights.
- **Natural Language Processing (NLP):** NLP is used to analyze and interpret human language, allowing businesses to extract insights from unstructured data such as social media posts, customer reviews, and emails.
- **Data Visualization:** Tools like Tableau, Power BI, and QlikView transform complex data into visual representations, such as graphs and dashboards, making it easier for decision-makers to understand and act upon insights.

Advanced business analytics tools are pivotal in analyzing market trends, consumer behavior, and operational efficiency, especially in the fast-paced environments of emerging markets. Predictive analytics can forecast market trends by examining historical data and identifying patterns that indicate future market behavior. For example, machine learning algorithms can analyze vast amounts of economic data to predict market shifts, helping businesses to prepare and adapt their strategies accordingly. This is particularly valuable in emerging markets, where economic conditions can change rapidly (Komolafe et al., 2024).

Advanced analytics tools like NLP can analyze customer feedback from various sources, providing insights into consumer preferences and sentiments. Businesses can create detailed profiles of customer behavior by integrating data from social media, surveys, and purchase histories. This allows companies to tailor their marketing strategies, improve customer experiences, and develop products that better meet consumer needs (Bharadwaj, 2023).

Big data analytics and prescriptive analytics play a crucial role in optimizing business operations. For instance, in supply chain management, predictive models can forecast demand more accurately, reducing inventory costs and minimizing stockouts. Prescriptive analytics can suggest optimal production schedules and logistics routes, enhancing efficiency and reducing operational costs (Rane, Choudhary, & Rane, 2024).

3.2. Benefits of Utilizing These Frameworks in Emerging Markets

The adoption of advanced business analytics frameworks offers numerous benefits for businesses operating in emerging markets. With access to comprehensive data insights, businesses can make more informed decisions. Advanced analytics provides a granular understanding of market conditions, customer preferences, and operational performance, allowing for more strategic and data-driven decision-making.

Utilizing advanced analytics helps businesses to identify and capitalize on opportunities faster than their competitors. Companies can develop innovative products and services that meet emerging market demands by understanding market trends and consumer behavior. Advanced analytics enables businesses to identify inefficiencies and optimize processes, significantly saving costs. For instance, predictive maintenance models can foresee equipment failures before they occur, reducing downtime and maintenance costs. Predictive analytics can help businesses anticipate and mitigate risks. By analyzing historical data and identifying patterns that precede market downturns or operational disruptions, companies can develop contingency plans and reduce their exposure to risks. Businesses can enhance their customer service and experience by leveraging insights from customer data. Personalized marketing and targeted product recommendations can increase customer satisfaction and loyalty (Adewusi et al., 2024).

General examples of successful implementation illustrate the transformative potential of advanced business analytics. Major retailers use predictive analytics to optimize inventory management and personalize marketing campaigns. By analyzing purchase data and customer interactions, retailers can predict demand, reduce excess inventory, and increase sales through targeted promotions.

Banks and financial institutions employ machine learning algorithms to detect fraudulent transactions and assess credit risk. These analytics tools enhance security and improve the accuracy of credit scoring, leading to better loan management and reduced defaults. Healthcare providers use big data analytics to improve patient care and operational efficiency. By analyzing patient records and treatment outcomes, healthcare organizations can identify effective treatments, reduce hospital readmissions, and streamline administrative processes (Bello, 2023).

Manufacturers leverage prescriptive analytics to optimize production processes and supply chain operations. Predictive maintenance models help foresee equipment failures, reducing downtime and maintenance costs, while optimization algorithms improve production schedules and logistics. Telecom companies utilize advanced analytics to enhance customer experience and network performance. By analyzing call data records and customer interactions, they can identify service issues, improve network reliability, and offer personalized customer support (Kalusivalingam, Sharma, Patel, & Singh, 2020).

4. Challenges and Opportunities

4.1. Key Challenges Faced by Businesses in Emerging Markets

Adopting advanced analytics in emerging markets is fraught with challenges that can impede the effective implementation and utilization of these tools. One of the primary challenges is the lack of infrastructure. Many emerging markets struggle with inadequate technological infrastructure, including limited access to high-speed internet and insufficient data storage facilities. This infrastructural deficit makes it difficult for businesses to collect, store, and analyze large datasets necessary for advanced analytics.

Another significant challenge is the scarcity of skilled professionals. There is a pronounced shortage of data scientists, analysts, and IT professionals who possess the expertise to develop and manage advanced analytics systems. This talent gap can hinder businesses from fully leveraging the potential of their data. Additionally, the cost of implementing advanced analytics solutions can be prohibitive for many businesses in emerging markets. The investment required for hardware, software, and skilled personnel can be substantial, and businesses may struggle to justify these costs without clear, immediate returns (Kross & Guo, 2019).

Data quality and availability also pose considerable challenges. Data may be fragmented, incomplete, or inconsistent in many emerging markets, making it difficult to derive accurate insights. Furthermore, issues related to data privacy and security can complicate the collection and analysis of data. Businesses must navigate varying regulations and ensure they handle data responsibly to maintain customer trust and comply with legal requirements (Nilashi, Keng Boon, Tan, Lin, & Abumalloh, 2023).

4.2. Potential Opportunities for Growth and Innovation

Despite these challenges, advanced analytics offers significant opportunities for growth and innovation in emerging markets. One of the most compelling opportunities is the ability to gain deeper insights into consumer behavior. By analyzing data from various sources, businesses can better understand customer preferences and needs, enabling them to tailor their products and services accordingly. This customer-centric approach can lead to increased customer satisfaction and loyalty, driving revenue growth.

Advanced analytics also presents opportunities for operational efficiency. By leveraging predictive and prescriptive analytics, businesses can optimize their supply chains, reduce costs, and improve productivity. For example, predictive maintenance can help companies foresee equipment failures and schedule timely repairs, minimizing downtime and extending the lifespan of machinery. Similarly, analytics can enhance inventory management by accurately predicting demand, reducing excess stock and stockouts (Ikevuje, Anaba, & Iheanyichukwu, 2024). Moreover, advanced analytics can spur innovation by identifying new market trends and opportunities. Businesses can use data to spot emerging trends before their competitors, allowing them to be proactive rather than reactive. This forward-looking approach can lead to the development of innovative products and services that meet evolving market demands (Gupta, Leszkiewicz, Kumar, Bijmolt, & Potapov, 2020).

4.3. Strategies to Overcome These Challenges

Businesses can employ several strategies to overcome the challenges associated with adopting advanced analytics in emerging markets. Investing in infrastructure is a fundamental step. Governments and private sector stakeholders can collaborate to enhance technological infrastructure, including expanding internet access and developing data centers. Public-private partnerships can play a crucial role in accelerating these developments (Omar et al., 2019).

Addressing the talent gap is also essential. Businesses can invest in training and development programs to build local data science and analytics expertise. Collaborating with educational institutions to create specialized curricula and offering internships and apprenticeships can help cultivate a skilled workforce. Additionally, businesses can leverage remote work arrangements to tap into global talent pools, mitigating the local shortage of skilled professionals (Plotkin, 2020).

Improving data quality and accessibility is another critical strategy. Implementing robust data governance frameworks can ensure data is collected, stored, and managed consistently. Businesses should prioritize data cleaning and integration processes to enhance data reliability. Fostering a data-driven culture within the organization can encourage employees to prioritize data accuracy and integrity in their daily operations (Ladley, 2019).

To address cost concerns, businesses can adopt scalable analytics solutions that grow with their needs. Cloud-based analytics platforms, for instance, offer flexibility and cost-effectiveness, allowing businesses to pay for only what they use. Moreover, demonstrating the tangible benefits of advanced analytics through pilot projects can help secure executive buy-in and justify further investments.

4.4. Future Trends and Developments in Business Analytics

Several trends and developments are poised to shape the future of business analytics in emerging markets. One significant trend is the increasing adoption of artificial intelligence (AI) and machine learning (ML). These technologies can enhance the predictive capabilities of analytics, enabling businesses to make more accurate and timely decisions. AI and ML can also automate routine tasks, freeing up human resources for more strategic activities.

Another trend is the rise of edge computing, which allows data processing to occur closer to the source of data generation. This can reduce latency and improve the speed of analytics, making real-time insights more accessible. Edge computing is particularly valuable in environments where immediate decision-making is crucial, such as manufacturing and logistics.

The integration of Internet of Things (IoT) devices is also set to transform business analytics. IoT devices generate vast amounts of data that can provide insights into various aspects of operations, from equipment performance to consumer usage patterns. Analyzing this data can help businesses optimize processes, enhance product designs, and improve customer experiences.

Furthermore, the focus on data privacy and security will continue to intensify. As regulations evolve and consumer awareness grows, businesses will need to adopt more stringent data protection measures. Implementing advanced cybersecurity protocols and ensuring compliance with global data protection standards will be essential to maintaining customer trust and avoiding legal penalties.

5. Conclusion and Recommendations

The exploration of advanced business analytics frameworks reveals their transformative potential in emerging markets. These tools and techniques, which include predictive and prescriptive analytics, big data, and machine learning, offer substantial benefits in understanding market trends, consumer behavior, and operational efficiency. By leveraging these frameworks, businesses can make informed decisions, optimize processes, and foster innovation, ultimately gaining a competitive advantage. However, several challenges must be addressed to fully harness advanced analytics's power. These challenges include infrastructural deficits, a shortage of skilled professionals, high implementation costs, and data quality issues.

The implications for businesses operating in emerging markets are profound. Emerging markets are characterized by rapid growth and dynamic conditions, necessitating the ability to swiftly adapt and innovate. Advanced business analytics provides the tools necessary for businesses to remain agile and responsive. By understanding and predicting market dynamics, businesses can proactively adjust their strategies, ensuring they stay ahead of the competition. Moreover, the insights gained from analytics can drive customer-centric approaches, enhancing customer satisfaction and loyalty, which are vital for sustained growth.

Furthermore, the operational efficiencies gained through advanced analytics can lead to significant cost savings, which is particularly beneficial in price-sensitive emerging markets. Predictive maintenance, optimized supply chains, and efficient resource allocation are just a few examples of how analytics can improve operational performance. Additionally, businesses can mitigate risks more effectively by using predictive models to foresee and prepare for potential disruptions.

To effectively implement advanced business analytics frameworks, businesses in emerging markets should consider several strategic recommendations. First, developing robust technological infrastructure is fundamental. Businesses should advocate for and participate in public-private partnerships to enhance internet access and data storage facilities.

Investing in cloud-based solutions can also provide scalable and flexible analytics capabilities without the need for significant upfront capital expenditure.

Addressing the talent gap is crucial. Businesses should invest in training and development programs to build local data science and analytics expertise. Collaborations with educational institutions to create specialized curricula and offering internships and apprenticeships can help cultivate a skilled workforce. Additionally, leveraging remote work arrangements can provide access to global talent.

Implementing robust data governance frameworks is essential for ensuring data quality and accessibility. Businesses should prioritize data cleaning and integration processes to enhance data reliability. Fostering a data-driven culture within the organization can encourage employees to prioritize data accuracy and integrity in their daily operations.

To address cost concerns, businesses can adopt scalable analytics solutions that grow with their needs. Cloud-based analytics platforms, for instance, offer flexibility and cost-effectiveness, allowing businesses to pay for only what they use. Demonstrating the tangible benefits of advanced analytics through pilot projects can help secure executive buy-in and justify further investments. With increasing regulatory scrutiny and consumer awareness, businesses must adopt stringent data protection measures. Implementing advanced cybersecurity protocols and ensuring compliance with global data protection standards will be essential to maintaining customer trust and avoiding legal penalties.

Businesses should explore the use of AI and machine learning to enhance their predictive capabilities. These technologies can automate routine tasks and provide deeper insights into data, enabling more accurate and timely decision-making. Integrating edge computing and IoT devices can provide real-time insights and improve the speed of analytics, particularly valuable in environments where immediate decision-making is crucial, such as manufacturing and logistics.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

- [1] Adeniran, I. A., Efunniyi, C. P., Osundare, O. S., Abhulimen, A. O., & OneAdvanced, U. (2024). The role of data science in transforming business operations: Case studies from enterprises. *Computer Science & IT Research Journal*, 5(8).
- [2] Adewusi, A. O., Okoli, U. I., Adaga, E., Olorunsogo, T., Asuzu, O. F., & Daraojimba, D. O. (2024). Business intelligence in the era of big data: a review of analytical tools and competitive advantage. *Computer Science & IT Research Journal*, 5(2), 415-431.
- [3] Assensoh-Kodua, A. (2019). The resource-based view: A tool of key competency for competitive advantage. *Problems and Perspectives in Management*, 17(3), 143.
- [4] Bedi, P., Goyal, S., & Kumar, J. (2020). *Basic structure on artificial intelligence: A revolution in risk management and compliance*. Paper presented at the 2020 3rd International Conference on Intelligent Sustainable Systems (ICISS).
- [5] Bello, O. A. (2023). Machine learning algorithms for credit risk assessment: an economic and financial analysis. *International Journal of Management*, 10(1), 109-133.
- [6] Bharadwaj, L. (2023). Sentiment analysis in online product reviews: mining customer opinions for sentiment classification. *Int J Multidiscip Res*, 5(5).
- [7] Cavusgil, S. T. (2021). Advancing knowledge on emerging markets: Past and future research in perspective. *International Business Review*, 30(2), 101796.
- [8] El Nemar, S., El-Chaarani, H., Dandachi, I., & Castellano, S. (2022). Resource-based view and sustainable advantage: a framework for SMEs. *Journal of Strategic Marketing*, 1-24.
- [9] Fernandez-Stark, K., & Gereffi, G. (2019). Global value chain analysis: A primer. In *Handbook on global value chains* (pp. 54-76): Edward Elgar Publishing.
- [10] France, S. L., & Ghose, S. (2019). Marketing analytics: Methods, practice, implementation, and links to other fields. *Expert Systems with Applications*, 119, 456-475.

- [11] Gereffi, G. (2019). Global value chains, development, and emerging economies 1. In *Business and Development Studies* (pp. 125-158): Routledge.
- [12] Gupta, S., Leszkiewicz, A., Kumar, V., Bijmolt, T., & Potapov, D. (2020). Digital analytics: Modeling for insights and new methods. *Journal of Interactive Marketing*, 51(1), 26-43.
- [13] Hamadaqa, M. H. M., Alnajjar, M., Ayyad, M. N., Al-Nakhal, M. A., Abunasser, B. S., & Abu-Naser, S. S. (2024). Leveraging Artificial Intelligence for Strategic Business Decision-Making: Opportunities and Challenges.
- [14] Ikevuje, A. H., Anaba, D. C., & Iheanyichukwu, U. T. (2024). Optimizing supply chain operations using IoT devices and data analytics for improved efficiency. *Magna Scientia Advanced Research and Reviews*, 11(2), 070-079.
- [15] Jerab, D. A., & Mabrouk, T. (2023). Strategic Excellence: Achieving Competitive Advantage through Differentiation Strategies. Available at SSRN 4575042.
- [16] Jones, L., Demirkaya, M., & Bethmann, E. (2019). Global value chain analysis: concepts and approaches. *J. Int'l Com. & Econ.*, 1.
- [17] Kalusivalingam, A. K., Sharma, A., Patel, N., & Singh, V. (2020). Enhancing Predictive Maintenance in Manufacturing Using Machine Learning Algorithms and IoT-Driven Data Analytics. *International Journal of AI and ML*, 1(3).
- [18] Kamran, Q. (2020). *Strategic value chain management: Models for competitive advantage*: Kogan Page Publishers.
- [19] Komolafe, A. M., Aderotoye, I. A., Abiona, O. O., Adewusi, A. O., Obijuru, A., Modupe, O. T., & Oyeniran, O. C. (2024). Harnessing business analytics for gaining competitive advantage in emerging markets: a systematic review of approaches and outcomes. *International Journal of Management & Entrepreneurship Research*, 6(3), 838-862.
- [20] Kross, S., & Guo, P. J. (2019). *Practitioners teaching data science in industry and academia: Expectations, workflows, and challenges*. Paper presented at the Proceedings of the 2019 CHI conference on human factors in computing systems.
- [21] Ladley, J. (2019). *Data governance: How to design, deploy, and sustain an effective data governance program*: Academic Press.
- [22] Nilashi, M., Keng Boon, O., Tan, G., Lin, B., & Abumalloh, R. (2023). Critical data challenges in measuring the performance of sustainable development goals: Solutions and the role of big-data analytics. *Harvard Data Science Review*, 5(3), 3-4.
- [23] Omar, Y. M., Minoufekr, M., & Plapper, P. (2019). Business analytics in manufacturing: Current trends, challenges and pathway to market leadership. *Operations Research Perspectives*, 6, 100127.
- [24] Paramesha, M., Rane, N. L., & Rane, J. (2024). Big data analytics, artificial intelligence, machine learning, internet of things, and blockchain for enhanced business intelligence. *Partners Universal Multidisciplinary Research Journal*, 1(2), 110-133.
- [25] Plotkin, D. (2020). *Data stewardship: An actionable guide to effective data management and data governance*: Academic press.
- [26] Rane, N., Choudhary, S., & Rane, J. (2024). Artificial intelligence, machine learning, and deep learning for sentiment analysis in business to enhance customer experience, loyalty, and satisfaction. Available at SSRN 4846145.
- [27] Zahra, S. A. (2021). The resource-based view, resourcefulness, and resource management in startup firms: A proposed research agenda. *Journal of Management*, 47(7), 1841-1860.