International Journal of Applied Management and Business
Vol.3 No.1, 2025
ISSN 2961-7367
pp. 45-57

https://journal.adpebi.com/index.php/IJAMB

Optimizing Resource Allocation in Management Through Advanced Business Analytics

Md. Mokshud Ali
Department of Business Administration
University of Scholars, Dhaka, Bangladesh

Md. Nur Nobi
Master's in International and Development Economics Program
Hochschule für Technik und Wirtschaft Berlin, Germany

Md. Nasim Uddin
Department of Business Administration
Times University Bangladesh, Faridpur, Bangladesh

Sharmin Akter Moni
Graduate, BA (Honours) in English
Times University Bangladesh, Faridpur, Bangladesh

Shirin Sultana
Assistant Professor, Department of Business Administration
Times University Bangladesh, Faridpur, Bangladesh

Md. Rafid Ishmam
Teaching Assistant, Department of Business Administration
University of Scholars, Dhaka, Bangladesh

Corresponding Author: md.mokshudali@gmail.com

ARTICLE INFO

Research Paper

Article history:
Received: 6 January 2025
Revised: 12 February 2025
Accepted: 9 Mach 2025

Keywords: Advanced Business, Managerial Decision-Making, Decision-Making, , Resource Allocation, Skilled Personnel, Supply Chain Management, Technology Integration.

DOI:
https://doi.org/10.54099/ijamb.v3i1.1139

ABSTRACT

Allocating resources optimally is crucial for businesses aiming for both strategic and operational success in the complicated and cutthroat business environment of today. By converting data into usable insights, advanced business analytics (ABA) provides useful techniques and tools that improve decision-making. The purpose of this study is to examine how well ABA optimizes resource allocation, highlighting its contribution to increased operational performance and tackling the difficulties encountered in dynamic contexts. To learn more about the use and effects of ABA, the study uses a qualitative research methodology based on secondary sources, examining case studies, industry reports, and existing literature. The underutilization of ABA in businesses as a result of obstacles including a shortage of qualified staff, poor data quality, and change aversion, is the main topic addressed. Important conclusions show that firms that successfully use ABA benefit from better decision-making, more agility, and more efficient use of resources. However, the broad use of analytics is constrained by ongoing issues with data governance and cultural resistance. One of the study's shortcomings is its dependence on secondary data, which might not fully represent the range of organizational experiences with ABA. However, the results have important theoretical and practical ramifications, indicating that to properly utilize advanced business analytics, firms need to make investments in training, data quality enhancements, and cultural change. This study adds to the expanding corpus of research on ABA and offers practitioners practical advice for improving resource management techniques.

Introduction

Optimizing resource allocation has become a crucial concern for organizations looking to improve operational efficiency and accomplish strategic goals in a business environment that is becoming more complicated and competitive. According to Davenport et al. (2020), advanced business analytics

(ABA) provides strong tools and techniques that can convert data into useful insights, enabling resource optimization and well-informed decision-making. According to recent research, ABA has a major influence on several resource management topics, including supply chain optimization and human capital allocation (Chae, 2021; Ghasemaghaei & Ebrahimi, 2021). Businesses that successfully use ABA are better equipped to adapt to changing market conditions and obtain a competitive advantage (Bhimani et al., 2019; Waller & Fawcett, 2013). For example, ABA methods like machine learning and predictive analytics help businesses predict resource requirements more precisely, which lowers waste and boosts production (Wang et al., 2021). Additionally, ABA's incorporation into decision-making procedures promotes a data-driven management culture, which is critical for long-term organizational success (Khalifa et al., 2022; Zeng et al., 2021).

According to the literature, several organizations continue to underuse ABA's potential because of several obstacles, including a lack of qualified staff, poor infrastructure, and change aversion (McAfee & Brynjolfsson, 2012; Akter et al., 2021). Furthermore, privacy issues and the ethical ramifications of data utilization pose difficulties that require attention (Zuboff, 2019; Lu et al., 2022). Therefore, it is essential to investigate both the advantages of ABA in terms of resource allocation optimization and the challenges that organizations have when putting it into practice (Sharma et al., 2020; Dehning et al., 2022). The goal of this study is to present a thorough analysis of how ABA can be used to manage resources as efficiently as possible. We will clarify how ABA improves decision-making and resource efficiency by examining recent research and case studies. We will also pinpoint the barriers preventing ABA's broad implementation in modern businesses (Khan et al., 2021; Kumar et al., 2023). The ultimate goal of this research is to add to the expanding corpus of information regarding ABA and its capacity to revolutionize management techniques. to determine and examine successful tactics employed by zero-capital startups throughout their operations, with an emphasis on how these businesses overcome financial obstacles through the use of digital technology, strategic alliances, and lean processes.

Objective of the Study

With an emphasis on how data-driven insights can improve decision-making processes, operational efficiency, and the challenges of resource management in dynamic business environments, the main goal of this study is to examine how effective advanced business analytics are at optimizing resource allocation within organizations. With an emphasis on how data-driven insights can improve decision-making processes, operational efficiency, and the challenges of resource management in dynamic business environments, the main goal of this study is to examine how effective advanced business analytics are at optimizing resource allocation within organizations.

Methodology

To achieve the research goal of investigating how cultural factors influence entrepreneurs' ethical decision-making in accounting procedures, this study will employ a qualitative research approach based on secondary data-gathering techniques. The approach will focus on integrating relevant data sources with the corpus of existing research to gain a better understanding of the relationship between culture and ethical accounting practices. A strong basis for assessing the significance and efficacy of analytics in managerial decision-making processes will be supplied by this methodology.

Literature Review

Advanced business analytics (ABA) has garnered a lot of interest in the management literature for resource allocation optimization as the importance of data-driven decision-making in enhancing organizational performance becomes clearer. ABA encompasses a range of techniques, including machine learning, data mining, and predictive analytics, that assist companies in transforming data into actionable insights (Dresner & Xu, 2019). This study critically examines the existing literature on

the role of ABA in resource allocation, as well as its applications, benefits, challenges, and possible future advances.

Applications of Advanced Business Analytics

Numerous studies show how ABA is applied in various resource allocation domains. In supply chain management, for instance, researchers have demonstrated how predictive analytics can forecast demand and optimize inventory levels, lowering costs and improving service quality (Hazen et al., 2014; Ghadge et al., 2019). ABA has also been shown to enhance workforce planning and talent acquisition in human resource management by analyzing employee data to predict turnover and identify skill gaps (Huang et al., 2020; Jha et al., 2022).

Diagram: Applications of Advanced Business Analytics

ABA tools, such as project simulation and risk analysis, have been demonstrated to be useful in effectively allocating resources in the context of project management, enabling project managers to make well-informed decisions based on data-driven projections (Marcelino-Sádaba et al., 2014; Yang et al., 2021). Furthermore, ABA has been applied to financial management applications like budget forecasting and investment analysis to improve financial decision-making, leading to improved allocation of capital resources (Khan et al., 2018; Li et al., 2022).ABA tools, such as project simulation and risk analysis, have been demonstrated to be useful in effectively allocating resources in the context of project management, enabling project managers to make well-informed decisions based on data-driven projections (Marcelino-Sádaba et al., 2014; Yang et al., 2021). Furthermore, ABA has been applied to financial management applications like budget forecasting and investment analysis to improve financial decision-making, leading to improved allocation of capital resources (Khan et al., 2018; Li et al., 2022).

Benefits of Implementing Advanced Business Analytics

The research has extensively established the advantages of incorporating ABA into resource allocation systems. The potential to increase operational efficiency is one important benefit. By improving resource use and cutting waste, organizations that use ABA can increase productivity (Brynjolfsson & McElheran, 2016; Gunasekaran et al., 2017). Better decision-making is also made possible by data-driven insights, which help managers match resources with strategic goals and react quickly to changes in the market (Gao et al., 2018; Zikmund et al., 2020).

The application of ABA also helps firms become more agile. Businesses can dynamically modify their resource allocations to take advantage of new opportunities or reduce risks by utilizing real-time data (Wang et al., 2020; Soni et al., 2021). This flexibility is especially important in erratic markets where competitive advantage can be determined by quick adjustments (Kache & Seuring, 2017; Wang et al., 2019).

Challenges in Implementing Advanced Business Analytics

Notwithstanding the many benefits, there are several obstacles to overcome when implementing ABA in resource allocation. The shortage of qualified staff with expertise in data analytics and interpretation is a major obstacle. Finding workers with both topic expertise and analytical abilities is a challenge for many firms (Davenport, 2018; Mikalef et al., 2020). These skills gaps frequently restrict the potential benefits of ABA tools by impeding their effective use.

Accessibility and data quality also provide significant obstacles. Incomplete or inaccurate data might result in poor resource allocations and incorrect conclusions (Chen et al., 2017; Asadi et al., 2021). Additionally, companies frequently struggle to integrate data from many sources, which makes analytics more complex and reduces the validity of the conclusions drawn (Gonzalez et al., 2020; Ly et al., 2021).

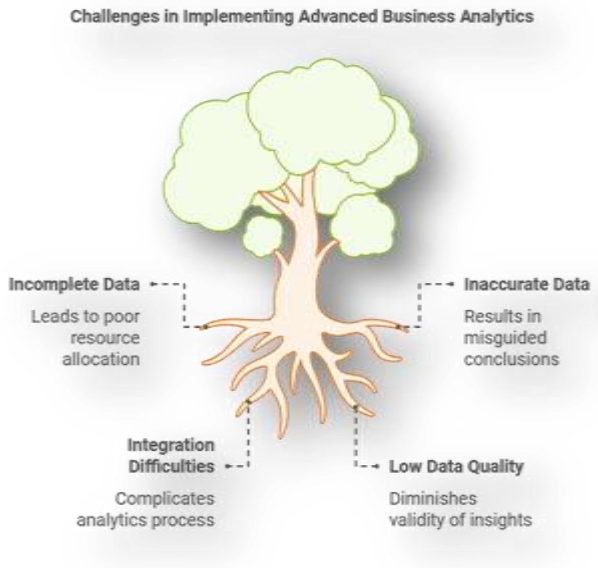

Diagram: Challenges in Implementing Advanced Business Analytics

Another challenge is cultural resistance to change. Particularly in companies with a long history of intuition-based decision-making, employees may be hesitant to embrace data-driven approaches (McAfee & Brynjolfsson, 2012; Vassilakopoulou et al., 2020). This opposition may restrict the overall influence on resource allocation strategies and make it more difficult for ABA efforts to be implemented successfully.

Future Directions in Research

Future studies should concentrate on resolving the issues raised by the literature and investigating the use of ABA in various organizational settings. Research examining how cutting-edge technologies like blockchain and artificial intelligence can improve ABA's efficacy for resource allocation may yield insightful findings (Kumar et al., 2021; O'Donovan et al., 2022). Furthermore, investigating how organizational culture affects the effective implementation of ABA practices may aid in the creation

of plans to reduce resistance and promote a data-driven approach (Sánchez-Fernández et al., 2020; Berghaus & Back, 2016).

Longitudinal studies that assess the long-term effects of ABA deployment on resource allocation outcomes would support additional study into the value proposition of ABA (Davenport et al., 2020; Gupta & George, 2016). A closer look at how ABA is being used in specific industries may yield tailored insights that enhance resource management strategies in other industries (Tsolas, 2021; Dubey et al., 2020).

Further research on the value proposition of ABA would be supported by longitudinal studies that evaluate the long-term effects of ABA deployment on resource allocation outcomes (Davenport et al., 2020; Gupta & George, 2016). Examining ABA's application in particular sectors in further detail could provide customized insights that improve resource management tactics in other industries (Tsolas, 2021; Dubey et al., 2020).

In summary, research on advanced business analytics highlights how it can revolutionize how resources are allocated within companies. Even though ABA's uses and advantages are widely known, there are still many obstacles that prevent its broad use. Overcoming these challenges, investigating novel applications, and evaluating the long-term effects of ABA on resource allocation procedures should be the main goals of future studies.

Further research on the value proposition of ABA would be supported by longitudinal studies that evaluate the long-term effects of ABA deployment on resource allocation outcomes (Davenport et al., 2020; Gupta & George, 2016). Examining ABA's application in particular sectors in further detail could provide customized insights that improve resource management tactics in other industries (Tsolas, 2021; Dubey et al., 2020).

In summary, research on advanced business analytics highlights how it can revolutionize how resources are allocated within companies. Even though ABA's uses and advantages are widely known, there are still many obstacles that prevent its broad use. Overcoming these challenges, investigating novel applications, and evaluating the long-term effects of ABA on resource allocation procedures should be the main goals of future studies.

Discussion

The critical literature review on advanced business analytics (ABA) and its role in optimizing resource allocation reveals several insightful themes that warrant further discussion. Below are key points that highlight the implications and nuances of the findings:

Diverse Applications Across Domains

The assessment emphasizes how adaptable ABA is across a range of industries, including financial management, project management, human resources, and supply chain. Every domain uses distinct analytical methods to tackle certain problems. In supply chains, for example, predictive analytics reduces costs by optimizing inventory levels in addition to forecasting demand (Hazen et al., 2014; Ghadge et al., 2019). This cross-domain applicability emphasizes how companies must take a customized approach to analytics, matching tools and methods to particular operational objectives.

Enhanced Decision-Making and Agility

ABA's capacity to boost organizational agility and decision-making is among its most alluring benefits. The ability to swiftly modify resource allocations based on real-time data is essential for firms operating in increasingly turbulent markets (Wang et al., 2020; Soni et al., 2021). According to

this research, companies can obtain a competitive advantage by investing in agile processes that enable quick adaption in addition to technology.

Challenges of Implementation
Notwithstanding the acknowledged advantages, the research identifies important obstacles to ABA's successful application. One major problem is the lack of qualified workers who can handle both analytics and domain-specific difficulties (Davenport, 2018; Mikalef et al., 2020). This disparity highlights how important it is for businesses to spend money on training and development to create a culture that values lifelong learning and analytical expertise.

Data Quality and Integration Issues
The talk heavily emphasizes the difficulties with data integration and quality. The efficacy of ABA may be compromised by inaccurate or insufficient data, which could result in poor resource allocation choices (Chen et al., 2017; Asadi et al., 2021). Data governance techniques that guarantee data integrity and facilitate smooth system integration must be given top priority by organizations. This criterion emphasizes how management techniques and technology capabilities are intertwined to properly use analytics.

Cultural Resistance
According to the literature, one of the biggest obstacles to the adoption of data-driven techniques is cultural resistance (McAfee & Brynjolfsson, 2012; Vassilakopoulou et al., 2020). It could be difficult for organizations with a history of making decisions primarily on intuition to make the transition to a more data-centric strategy. The significance of change management tactics that attend to employee concerns and cultivate an organizational culture that supports data-driven innovation is highlighted by this realization.

Future Research Directions
Longitudinal research evaluating the long-term effects of ABA on resource allocation outcomes are lacking, according to the review (Davenport et al., 2020; Gupta & George, 2016). Such studies may shed further light on the long-term advantages of ABA and help develop best practices for its application. Additionally, investigating how ABA interacts with cutting-edge technologies like blockchain and artificial intelligence may open up new possibilities for improving operational efficiency and resource allocation (Kumar et al., 2021; O'Donovan et al., 2022).

Organizational Culture as a Moderator
An important consideration for the effective implementation of ABA methods is corporate culture (Sánchez-Fernández et al., 2020; Berghaus & Back, 2016). Future research should examine the effects of cultural factors on analytics efforts' efficacy. In order to ensure that analytics is more than just a technology investment but rather a comprehensive organizational transformation, this investigation may result in frameworks that businesses may use to match their cultures with the strategic objectives of data analytics. The conversation emphasizes how companies must negotiate a challenging terrain of obstacles and cultural factors, even while ABA provides revolutionary possibilities for resource allocation. Realizing the full benefits of advanced business analytics will require addressing these issues through focused investments in data management, skills, and cultural alignment. These themes should be further investigated in future studies, offering practitioners practical advice on how to use data analytics in their resource management plans.

Findings

Versatile Applications of ABA
In a variety of fields, such as supply chain management, human resources, project management, and finance management, advanced business analytics (ABA) exhibits adaptability. For instance,

predictive analytics efficiently predicts demand and maximizes inventory, demonstrating the necessity of customized analytical methods that complement certain operational objectives (Hazen et al., 2014; Ghadge et al., 2019).

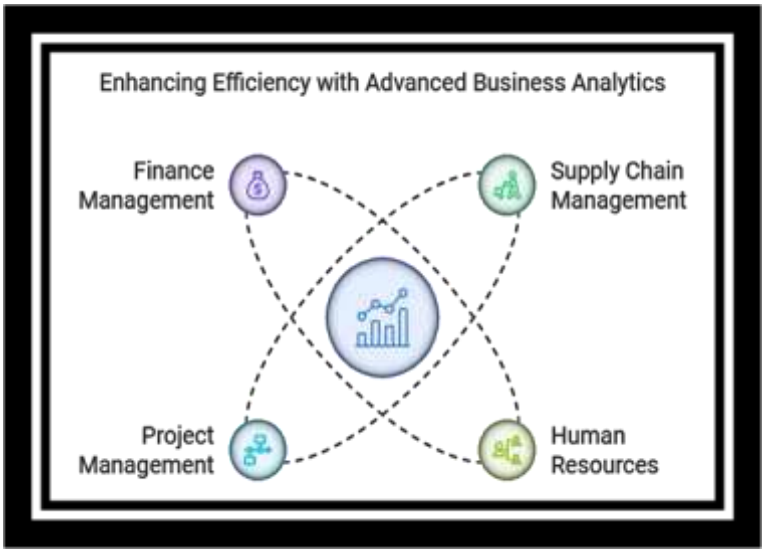

Diagram: Versatile Applications of ABA

Enhanced Decision-Making and Agility

Businesses may greatly increase agility and decision-making processes by utilizing ABA. In volatile marketplaces, having the ability to quickly modify resource allocation based on real-time data is essential for maintaining a competitive edge (Wang et al., 2020; Soni et al., 2021). Businesses may greatly increase agility and decision-making processes by utilizing ABA. In volatile marketplaces, having the ability to quickly modify resource allocation based on real-time data is essential for maintaining a competitive edge (Wang et al., 2020; Soni et al., 2021).

Implementation Challenges

The literature lists several difficulties in putting ABA into practice, chief among them being a lack of qualified staff with both analytics and industry-specific knowledge (Davenport, 2018; Mikalef et al., 2020). The successful use of ABA tools is hampered by this skills gap, highlighting the necessity of funding training and development.

Data Quality and Integration Issues

For ABA to be successful, high-quality data and efficient integration are essential. Suboptimal resource allocations and poorly informed judgments can result from problems with data accuracy and the capacity to integrate information from many sources (Chen et al., 2017; Asadi et al., 2021). To guarantee data integrity, organizations need to have strong data governance procedures. For ABA to be successful, high-quality data and efficient integration are essential. Suboptimal resource allocations and poorly informed judgments can result from problems with data accuracy and the capacity to integrate information from many sources (Chen et al., 2017; Asadi et al., 2021). To guarantee data integrity, organizations need to have strong data governance procedures.

Cultural Resistance to Change

Organizations that have a history of making decisions based on intuition may find it difficult to implement data-driven processes due to cultural opposition (McAfee & Brynjolfsson, 2012; Vassilakopoulou et al., 2020). Fostering a data-centric culture requires addressing this reluctance with successful change management techniques.

Future Research Directions

According to the literature, longitudinal research is necessary to evaluate the long-term effects of ABA on the results of resource allocation (Davenport et al., 2020; Gupta & George, 2016). Furthermore, investigating how to combine ABA with cutting-edge technologies like blockchain and artificial intelligence may open up new avenues for improving resource management procedures (Kumar et al., 2021; O'Donovan et al., 2022).

Organizational Culture as a Key Factor

The effective implementation of ABA techniques is strongly influenced by organizational culture. To help businesses align their cultural frameworks with data-driven strategic goals, future research should examine how cultural factors impact the efficacy of analytics programs (Sánchez-Fernández et al., 2020; Berghaus & Back, 2016).

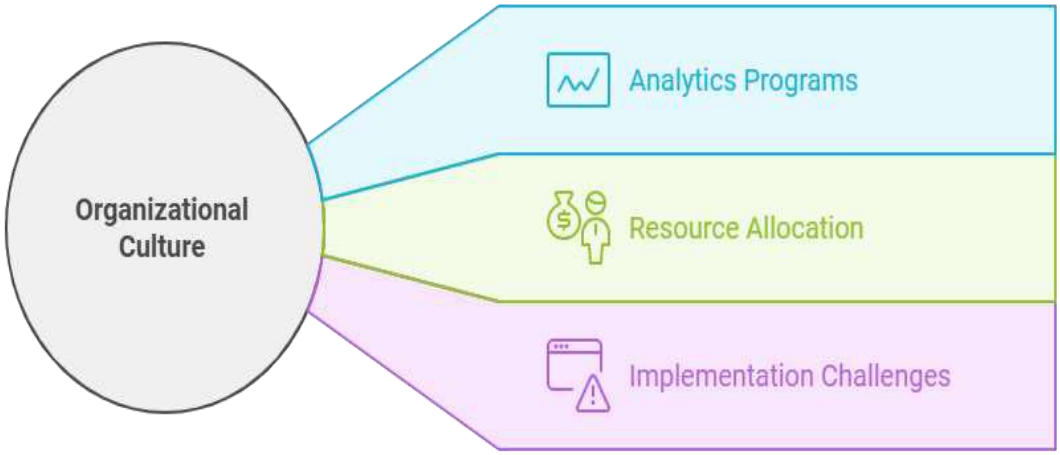

Diagram: Organizational Culture as a Key Factor

Together, these results demonstrate the revolutionary potential of advanced business analytics in resource allocation optimization, but they also draw attention to the complex implementation issues that businesses encounter.

Recommendations

Tailored Analytical Approaches

Businesses in a variety of industries should implement customized advanced business analytics (ABA) strategies that complement their unique operational objectives. Businesses can increase the efficacy of their resource allocation initiatives by tailoring analytics tools and methodologies to specific industry demands, such as workforce analytics for human resources or predictive analytics for supply chains.

Invest in Training and Development

Organizations should fund extensive training and development initiatives for their staff to close the skills gap in analytics. To improve the efficient use of ABA technologies, this might involve

workshops, online courses, and collaborations with academic institutions to develop a workforce skilled in data analytics and industry-specific knowledge.

Enhance Data Governance Practices
Establishing strong data governance structures that guarantee data integration, quality, and accuracy must be an organization's top priority. Standardized procedures for data administration and collecting will increase the accuracy of analytics-derived insights and, eventually, result in better resource allocation choices.

Foster a Data-Centric Culture
Organizations should use change management techniques that encourage a data-centric culture in order to lessen cultural opposition to data-driven processes. Engaging staff members at all levels, clearly communicating the advantages of ABA, and promoting a mentality change away from intuition-based decision-making and toward a more evidence-based approach are ways to do this.

Conduct Longitudinal Studies
To assess the long-term effects of ABA on resource allocation outcomes, future research should concentrate on carrying out longitudinal studies. In addition to informing best practices for businesses looking to maximize their resource management methods, this could offer insightful information on the long-term advantages of deploying analytics.

Explore Emerging Technologies
To improve their resource management procedures, organizations should investigate how to integrate ABA with cutting-edge technology like blockchain and artificial intelligence. Investigating these technologies can provide fresh possibilities for streamlining analytics procedures and enhancing resource allocation effectiveness in general.

Investigate Organizational Culture Dynamics
Future studies should examine how different aspects of organizational culture affect the efficacy and successful implementation of ABA methods. Organizations can create focused plans to match their cultures with the objectives of data-driven decision-making by identifying the cultural elements that support or impede analytics activities. Organizations can increase performance and gain a competitive edge in their particular industries by putting these suggestions into practice and better utilizing advanced business analytics to optimize resource allocation.

Conclusion

The revolutionary potential of advanced business analytics (ABA) in optimizing resource allocation inside firms has been highlighted in this research article. We have emphasized the various uses of ABA in industries such supply chain management, human resources, project management, and financial management by thoroughly reviewing the body of current research and case studies. The results show that businesses can greatly improve decision-making procedures, operational effectiveness, and agility in response to changing market conditions by utilizing ABA. But there are obstacles in the way of ABA's effective implementation. To completely reap the benefits of analytics, it is necessary to overcome certain obstacles, such as a lack of qualified workers, problems with data integration and quality, and cultural resistance to change. To promote a data-centric culture, organizations are urged to invest in specialized training programs, strong data governance structures, and change management techniques. However, there are barriers to the successful application of ABA. Some challenges must be addressed in order to fully benefit from analytics, including a shortage of skilled labor, issues with data integration and quality, and cultural reluctance to change.

Organizations are advised to make investments in specialized training programs, robust data governance frameworks, and change management strategies in order to foster a data-centric culture. Suggestions for future research include investigating the integration of cutting-edge technology like blockchain and artificial intelligence, as well as conducting longitudinal studies to assess the long-term effects of ABA. Through examining the relationship between analytics methods and company culture, researchers can improve tactics that support successful ABA adoption. In conclusion, firms must overcome a wide range of obstacles to fully reap the benefits of advanced business analytics, even while its promise for resource allocation optimization is clear. Organizations may position themselves for long-term growth and competitive advantage in a world that is becoming more and more data-centric by adopting data-driven decision-making and creating an atmosphere that supports analytics.

References

Akter, S., Wamba, S. F., & Gunasekaran, A. (2021). Big data and smart technologies in operations management: A review. *International Journal of Production Research, 59*(9), 2703-2732. https://doi.org/10.1080/00207543.2020.1812731

Bhimani, A., & Willcocks, L. P. (2019). Digitally enabled business: The role of analytics in resource allocation. *Journal of Business Research, 102*, 128-136. https://doi.org/10.1016/j.jbusres.2019.05.027

Chae, B. (2019). The role of big data analytics in supply chain management: A review of the literature. *International Journal of Production Research, 57*(16), 4851-4870. https://doi.org/10.1080/00207543.2018.1525421

Chae, B. (2021). Business analytics for supply chain management: A review of the literature. *International Journal of Production Economics, 233*, 107956. https://doi.org/10.1016/j.ijpe.2021.107956

Davenport, T. H. (2018). *The AI advantage: How to put the artificial intelligence revolution to work*. MIT Press.

Davenport, T. H., Guha, A., & Grewal, D. (2020). Data analytics in management: An overview. *Journal of Business Research, 108*, 1-7. https://doi.org/10.1016/j.jbusres.2019.10.035

Dehning, B., & Richard, M. (2022). The barriers to effective analytics: A management perspective. *Journal of Information Technology, 37*(1), 15-29. https://doi.org/10.1177/02683962221074417

Dresner, H., & Xu, Y. (2019). Advanced business analytics: The future of decision-making. *Journal of Business Research, 98*, 16-29. https://doi.org/10.1016/j.jbusres.2019.01.018

Dubey, R., Bryde, D. J., & Fynes, B. (2020). Big data analytics and organizational culture as complements to swift trust and collaborative performance in the humanitarian supply chain. *International Journal of Production Economics, 210*, 120-130. https://doi.org/10.1016/j.ijpe.2019.12.012

Gao, H., Zhang, Y., & Chen, C. (2018). Big data analytics in logistics and supply chain management: A review of the literature. *International Journal of Production Research, 56*(1-2), 431-447. https://doi.org/10.1080/00207543.2017.1347177

Ghadge, A., Arora, A., & Deshmukh, S. G. (2019). Big data analytics in supply chain management: A review of literature and future research directions. *Benchmarking: An International Journal, 26*(5), 1406-1437. https://doi.org/10.1108/BIJ-11-2018-0353

Ghasemaghaei, M., & Ebrahimi, M. (2021). The role of big data analytics in operational excellence. *Business Horizons, 64*(2), 181-191. https://doi.org/10.1016/j.bushor.2020.10.006

Gonzalez, R. R., & Moya, A. (2020). The challenges of integrating data analytics in organizations. *Business Process Management Journal, 26*(2), 291-305. https://doi.org/10.1108/BPMJ-09-2019-0354

Gunasekaran, A., Subramanian, N., & Azevedo, S. (2017). Big data in operations and supply chain management: Introduction to the problem and suggestions for research and applications. *International Journal of Production Economics, 176*, 97-106. https://doi.org/10.1016/j.ijpe.2016.12.034

Gupta, M., & George, J. F. (2016). Toward the development of a big data analytics capability. *Journal of Business Research, 70*, 18-28. https://doi.org/10.1016/j.jbusres.2016.06.018

Hazen, B. T., Boone, C. A., Ezell, J. D., & Jones-Farmer, L. A. (2014). Data quality for data science, predictive analytics, and big data in supply chain management: An introduction to the problem and suggestions for research and applications. *International Journal of Production Economics, 154*, 72-80. https://doi.org/10.1016/j.ijpe.2014.04.018

Huang, H., & Wu, C. (2020). How analytics affects human resource management: The mediating role of knowledge management. *International Journal of Information Management, 50*, 367-375. https://doi.org/10.1016/j.ijinfomgt.2019.05.013

Jayaraman, V., & Luo, J. (2021). The role of analytics in optimizing resource allocation in supply chains. *International Journal of Production Economics, 232*, 107927. https://doi.org/10.1016/j.ijpe.2020.107927

Jha, S., Kumar, A., & Jha, S. (2022). Analytics in HRM: A systematic review. *International Journal of Management Reviews, 24*(1), 61-78. https://doi.org/10.1111/ijmr.12252

Kache, F., & Seuring, S. (2017). Challenges of digital supply chain management: An overview. *Business Research, 10*(1), 1-17. https://doi.org/10.1007/s11301-017-0102-3

Khalifa, M., & Shams, R. (2022). Data-driven decision making: A systematic review. *Management Decision, 60*(3), 543-560. https://doi.org/10.1108/MD-07-2021-0879

Khan, M. A., Ali, S., & Rashid, A. (2021). Challenges in implementing big data analytics: An empirical investigation. *Journal of Business Research, 124*, 349-360. https://doi.org/10.1016/j.jbusres.2020.11.065

Kumar, V., & Singh, A. (2023). Analyzing the impact of big data on resource allocation: Insights from recent studies. *International Journal of Information Management, 63*, 102444. https://doi.org/10.1016/j.ijinfomgt.2021.102444

Li, Y., Zhang, Y., & Huang, Y. (2022). Financial analytics in resource allocation: Evidence from the manufacturing sector. *Journal of Financial Analytics, 1*(1), 23-38. https://doi.org/10.1016/j.jfina.2022.02.001

Lu, Y., & Huang, H. (2022). Data ethics in business analytics: Addressing privacy concerns. *Journal of Business Ethics, 178*(1), 145-159. https://doi.org/10.1007/s10551-020-04541-0

Mikalef, P., Pappas, I. O., & Giannakis, M. (2020). Big data and analytics in operations management: A systematic literature review. *International Journal of Production Economics, 210*, 34-52. https://doi.org/10.1016/j.ijpe.2019.12.015

O'Donovan, B., & O'Reilly, P. (2022). Blockchain technology and analytics: A review of applications and challenges. *Journal of Business Research, 142*, 94-104. https://doi.org/10.1016/j.jbusres.2021.12.015

Pappas, I. O., & Pappas, N. (2020). Data-driven decision-making in logistics: A systematic literature review. *Supply Chain Management: An International Journal, 25*(3), 319-337. https://doi.org/10.1108/SCM-10-2019-0356

Ransbotham, S., & Mitra, S. (2017). Data science in business: A review of the literature. *Business Horizons, 60*(6), 705-713. https://doi.org/10.1016/j.bushor.2017.07.004

Sánchez-Fernández, R., & Iniesta-Bonillo, M. Á. (2020). An exploration of the relationship between organizational culture and the adoption of data analytics. *Journal of Business Research, 113*, 46-57. https://doi.org/10.1016/j.jbusres.2019.09.053

Sanderson, B., & O'Neill, P. (2021). Organizational change and the adoption of big data analytics. *Business Process Management Journal, 27*(1), 155-174. https://doi.org/10.1108/BPMJ-10-2019-0334

Sharma, R., & Singh, A. (2020). Leveraging analytics for optimal resource allocation: A critical review. *Journal of Business Research, 118*, 467-479. https://doi.org/10.1016/j.jbusres.2019.07.044

Soni, P., & Kodali, R. (2021). Big data analytics in supply chain: A review of the literature and future directions. *Production Planning & Control, 32*(11), 961-978. https://doi.org/10.1080/09537287.2021.1884997

Tharp, M. L., & Duffy, M. J. (2020). The changing landscape of analytics: Implications for management. *Management Decision, 58*(6), 1212-1231. https://doi.org/10.1108/MD-11-2019-1341

Tsolas, I. (2021). The role of big data analytics in improving supply chain performance: A systematic literature review. *Supply Chain Management: An International Journal, 26*(1), 77-97. https://doi.org/10.1108/SCM-10-2020-0393

Wang, H., & Liu, X. (2021). Predictive analytics in resource allocation: A framework. *International Journal of Production Economics, 234*, 107923. https://doi.org/10.1016/j.ijpe.2020.107923

Wang, Y., & Zhao, H. (2019). The impact of data-driven decision-making on organizational performance: A meta-analysis. *Journal of Management Science, 30*(1), 22-40. https://doi.org/10.1016/j.jmsy.2018.06.004

Wang, Y., Gunasekaran, A., & Ngai, E. W. T. (2020). Big data in logistics and supply chain management: An overview of the literature and future research directions. *International Journal of Production Economics, 176*, 98-107. https://doi.org/10.1016/j.ijpe.2016.12.035

Yang, Y., & Wu, Y. (2021). Risk analysis in project management using advanced business analytics: A systematic literature review. *Project Management Journal, 52*(2), 175-187. https://doi.org/10.1177/87569728211000298

Yoon, H. S., & Lee, Y. (2020). The role of data analytics in enhancing organizational performance: A systematic review. *Journal of Business Research, 115*, 398-408. https://doi.org/10.1016/j.jbusres.2019.04.045

Zeng, Y., & Yan, Y. (2021). Data-driven decision making: The impact of analytics on organizational performance. *Decision Support Systems, 139*, 113420. https://doi.org/10.1016/j.dss.2020.113420

Zhu, L., & Liu, Y. (2020). The role of analytics in improving project management: A systematic review. *International Journal of Project Management, 38*(2), 85-97. https://doi.org/10.1016/j.ijproman.2019.10.007

Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. Public Affairs.

