



Application of Value-Based Management in Management Accounting: Increasing Efficiency Through Technology Integration in the Industrial Era 4.0

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Abstract

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The application of value-based management (VBM) in modern companies faces various challenges, especially in the era of the Industrial Revolution 4.0, characterized by digitalization and advanced technology such as the Internet of Things (IoT) and Big Data. The gap phenomenon that has emerged is that many companies still have not fully utilized VBM in strategic decision-making, with more focus on short-term targets. This study aims to understand the impact of VBM on company performance and decision-making effectiveness, as well as the challenges of its implementation in the era of digitalization. The formulation of the problem includes the impact of VBM on company performance, its application in the digital era, and the challenges companies face in optimizing value-based resources. This study uses a literature review method that analyzes literature related to VBM and Resource-Based View (RBV). The results show that VBM can improve company performance by optimizing strategic resources but faces challenges in technology integration, human resources, and resistance to change. The implications of this study show the importance of investment in technology and internal capability development to support the implementation of VBM. The latest of this research lies in the discussion related to management accounting, which combines VBM with digital technology to create long-term value for the company.

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INTRODUCTION

Management accounting is an important topic in the modern business world, where competition is fiercer, and financial decisions must be taken appropriately to ensure the company's continuity of operations and growth (Ghasemi et al., 2016; Pedroso et al.,

2020). Management accounting serves as an analysis and decision-making tool that relies on financial data and non-financial information relevant to business strategy (Paula Monteiro et al., 2022; Wyatt, 2008). Previous research by Randers (2012) and Tripathi et al. (2023) states that management accounting is a value-added process focusing on continuous improvement. This process allows management to plan, design, and operate financial and non-financial information to achieve the company's strategic goals (Astuti et al., 2018). The phenomenon that has emerged today is the increasing need for more comprehensive information in decision-making. The financial information provided by traditional accounting, such as income statements and balance sheets, is considered insufficient to deal with the complexities of the modern business environment. Companies must integrate strategic and relevant information in their management processes, such as operational data, market outlook, and risk analysis (Shi, 2021). Therefore, management accounting plays an essential role in providing financial and non-financial data that can support the strategic decision-making process.

Further, Nurmala Dewi & Puspitasari (2023) and Manurung et al. (2022) state that management accounting includes identifying, measuring, collecting, analyzing, compiling, interpreting, and communicating financial information used by management. This process assists management in planning, evaluating, and controlling the company's activities and ensuring the efficient use of resources. In practice, management accounting helps companies analyze costs, evaluate performance, and develop strategies based on information relevant to operational conditions.

However, a gap phenomenon appears in companies' application of management accounting. One of these gaps is the understanding that management accounting is often considered a cost-recording tool. The role of management accounting is broader than that. Management accounting should be a tool that supports companies in creating added value for shareholders and other stakeholders. For example, by applying Value-Based Management (VBM), companies can focus on creating long-term value that impacts business sustainability (Setiawan & Rahmawati, 2017). VBM allows management to use financial and non-financial information to identify the most effective strategies to increase the company's value. However, many companies still have not fully utilized this VBM concept and tend to focus on short-term financial targets.

Another gap is in terms of the quality of the data used by management accounting because even though the company has access to various data sources, often the data is not processed correctly or is not updated according to the needs of management (Abad-Segura & González-Zamar, 2020). This causes strategic decision-making to be less than optimal because the data used does not reflect the actual condition of the company. In this situation, practical management accounting should provide accurate and relevant data so that management can make better decisions to achieve strategic goals. In addition, there is also a gap in terms of the use of digital technology in management accounting. In today's digitalization era, companies can use technologies such as Big Data Analytics, Artificial Intelligence, and Machine Learning to analyze complex data and gain deeper insights (Mahlendorf et al., 2023). However, implementing this technology in management accounting is still uneven in many small and medium-sized companies. Many companies do not yet have an integrated system to manage their financial and non-financial data. Digital technology can help companies conduct prospective analyses, forecast market trends, and identify risks early.

Another gap phenomenon is related to the role of management accounting in company supervision. While management accounting can provide data critical for internal controls, not all companies optimize using this information in conducting audits

and performance evaluations (Gunarathne et al., 2020). Management accounting can assist management in identifying problems early, such as decreased productivity or increased operational costs, so corrective action can be taken immediately (Hristov et al., 2022). However, in practice, supervision is often only carried out reactively when problems have arisen and impact the company's financial performance.

Following the phenomenon and gap phenomenon above, the formulation of the problem in this article is as follows:

- How does Value-Based Management (VBM) impact the Company's performance and Decision-Making Effectiveness?
 - How to Manage Value-Based Costs in the Era of the Industrial Revolution 4.0?
 - How are the Challenges of Value-Based Management implemented in the Company?
- Furthermore, based on the formulation of the problem that has been described, the research objectives in this article are as follows:

- Understand how implementing VBM can improve company performance and Decision-Making Effectiveness.
- Identify how VBM is being implemented in the era of digitalization and automation.
- Identify the obstacles that companies face in implementing VBM.

In addition, this research contributes to enriching literature studies related to VBM, especially in the context of the Industrial Revolution 4.0. The research results are expected to be a reference for developing theories related to value-based cost management and its impact on company performance in an increasingly complex and digital business environment. Furthermore, the results of this study are expected to be used as a guide for company management in implementing VBM to improve operational and financial performance, as well as make more data-driven decisions. Therefore, unlike previous research that discussed VBM from a traditional perspective, this study focuses on how VBM can be integrated with digital technology to create added value in the company. This research fills the gap related to the adaptation of VBM in the era of digitalization.

LITERATURE REVIEW

Resource-based view (RBV) is a theory that focuses on an organization's internal resources as the key to achieving competitive advantage. RBV views that the difference in performance between companies is caused by differences in the ownership and utilization of resources owned by the company (Freeman et al., 2021; Khanra et al., 2021). The two main assumptions in this theory are that resources between companies in an industry are not homogeneous and that those resources cannot always be easily transferred to other companies. Therefore, resource differences between companies can be lasting and sustainable. RBV identifies resources with specific characteristics as the basis for creating a sustainable competitive advantage. Further, the resource must meet the criteria *Valuable* (valuable), *Rare* (rare), *Inimitable* (not easily imitated), and *Non-substitutable* (irreplaceable), known by the acronym VRIN (Nason & Wiklund, 2015). Resources that meet these criteria can help companies maintain a competitive position in the market and create more value for shareholders.

Moreover, Value-Based Management (VBM) is a management approach that focuses on creating value for shareholders by using financial and non-financial information in decision-making (Battilana et al., 2022). VBM utilizes relevant information to ensure that every decision taken by management will positively impact the company's value in the long run. VBM combines management accounting principles with

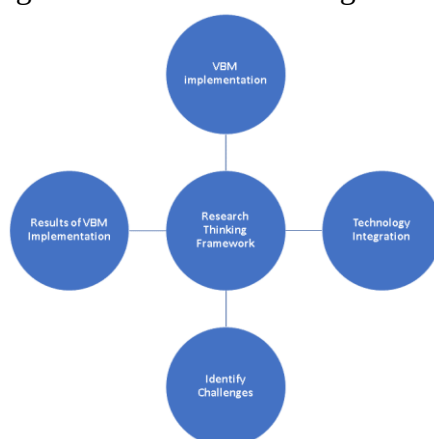
a strategic approach to optimize resource allocation to achieve the company's financial goals (Battilana et al., 2022). Furthermore, VBM also emphasizes the importance of measuring and managing the company's performance to increase the economic value created by the company. Through this approach, companies focus on short-term financial results and long-term strategies that can sustainably increase the company's value.

The merger between RBV and VBM in the context of management accounting provides a robust approach to optimizing the use of a company's resources to achieve strategic objectives and increase value for shareholders. RBV provides a framework for understanding the company's internal resources and capabilities, which can be used as a basis for VBM implementation. By understanding the strategic resources owned, companies can direct the VBM strategy to maximize the use of these resources to create value. Furthermore, it can be described to what extent RBV can optimize VBM as follows:

- **Resource Optimization Through VBM:** In the context of RBV, internal resources such as Human Capital, organizational capital, and Intellectual Capital are critical elements that can increase the company's competitive advantage (Gerhart & Feng, 2021). VBM uses the information about these resources to design strategies that focus on increasing shareholder value. For example, companies can use data on innovation capabilities (Innovation Capital) and customer relationships (Relationship Capital) to identify opportunities that can increase the company's value.
- **Measurement and Value Creation:** RBV and VBM complement each other in the measurement and value creation process. While RBV identifies resources that can be the basis of competitive advantage, VBM offers a method to measure how much those resources contribute to a company's value (Rehman et al., 2021). For example, VBM uses approaches such as Economic Value Added (EVA) or Tobin's Q to measure the impact of resource management on company value. This lets companies understand how their strategic resources can be optimized to achieve long-term financial goals.
- **Use of Technology in RBV-Based VBM:** In the era of digitalization, technologies such as *Big Data Analytics* and *Machine Learning* can be used to support the implementation of VBM in managing enterprise resources (Chang et al., 2020). In addition, RBV provides a foundation for companies to identify technology resources that can provide a competitive advantage (Zahra, 2021). This technology allows companies to manage financial and non-financial data more effectively, thereby supporting more accurate and efficient value-based decision-making.
- **Organizational Capability Development:** RBV emphasizes the importance of internal capability development as a source of competitive advantage. VBM assists in formulating strategies that direct the development of these capabilities to create economic value (Zahra, 2021). For example, companies can use VBM to allocate investments in human resource training and development focused on improving innovation capabilities. This allows companies to use human capital optimally following the RBV principle, which emphasizes the importance of human resources as a strategic asset.

Based on the objectives of the research and literature review, the framework of research thinking can be illustrated as follows:

Figure 1. Research Thinking Framework



Source: From various data that has been processed

Following Figure 1 above, it can be explained that the framework of research thinking in this article is as follows:

- The implementation of VBM is based on optimizing the company's strategic resources following RBV, which focuses on long-term value creation.
- Technology integration allows for more effective implementation of VBM in the era of digitalization, where richer data can support value-based decision-making.
- Identifying Challenges in VBM Implementation aims to understand the obstacles that prevent companies from optimizing the use of resources, as well as provide solutions to overcome these challenges.
- The results of the implementation of VBM are expected to improve the company's financial and non-financial performance and support more effective decision-making.

RESEARCH METHODS

This study uses the literature review method (*literature review*) to explore related phenomena of Value-Based Management (VBM) in the context of management accounting and its integration with digital technology in the era of the Industrial Revolution 4.0. Furthermore, in this study, a literature review was carried out by referring to previous research published in scientific journals, proceedings, and relevant scientific books. A literature review serves as a foundation for understanding the theory and concept of VBM and identifying research gaps that still exist in the literature (Nugroho et al., 2023). The stages are as follows:

- **Data Collection:** The data collection in this study used secondary data collected from the following sources: (i) Scientific Journals, (ii) Conference Proceedings, and (iii) Scientific Books.
- **Data Collection Mechanism:** The data collection process is carried out by systematically searching literature relevant to the research topic using predetermined keywords.
- The data obtained through the literature review is analyzed following the formulation of the problem or research question: (i) How does Value-Based Management (VBM) impact the Company's performance and Decision-Making Effectiveness? (ii) How to Manage Value-Based Costs in the Era of Industrial Revolution 4.0? (iii) How are the Challenges of Value-Based Management implemented in the Company?

RESULTS AND DISCUSSION

Benefits of *Value-Based Management*

Value-Based Management (VBM) is a management approach that emphasizes creating long-term value for shareholders. By implementing VBM, companies can integrate financial and non-financial information in the decision-making process, ultimately improving the company's performance. Previous research has shown that companies that implement VBM effectively can achieve higher financial performance than companies that do not. The main benefit of VBM in improving company performance lies in its ability to optimize the allocation of resources that the company has (Zhu et al., 2022)). In this approach, every decision taken by management is evaluated based on its impact on the company's value so that decisions that do not provide added value can be avoided. It is related to the Resource-Based View (RBV) theory, which argues that a company's competitive advantage lies in utilizing unique and difficult-to-replicate internal resources. In the context of RBV, VBM assists companies in identifying strategic resources that are valuable and rarely owned by competitors so that companies can focus on creating value by optimizing those resources (Barney et al., 2021). For example, the use of intellectual capital, human capital, and organizational capital in management decisions can increase innovation and operational efficiency, which in turn improves the company's performance.

VBM is also vital in facilitating decision-making in an increasingly complex business environment. By providing more comprehensive and relevant information, VBM allows management to make more data-driven and value-oriented decisions. These decisions include capital allocation, risk management, and the selection of business strategies that can generate maximum value for the company in the long term. In the Resource-Based View framework, strategic resource-oriented decision-making enables companies to achieve sustainable competitive advantage. By utilizing financial and non-financial data, VBM supports management in evaluating whether the company's resources have been optimized or require further improvement to create value. This information also helps identify opportunity costs and associated risks, which form the basis for more informed decision-making. Previous research conducted by Gerhart & Feng (2021) and D'Oria et al. (2021) shows that the implementation of VBM up to the business unit level has a positive impact on the effectiveness of divestment by optimizing the available information about the value creation of each business unit. In strategic business portfolio management decision-making, VBM clarifies each unit's contribution to the company's overall performance to make more appropriate decisions.

Resource-Based View (RBV) and Value-Based Management theories complement each other in supporting companies to achieve competitive advantage and sustainable economic value. RBV emphasizes the importance of managing valuable, rare, inimitable, and non-substitutable resources (VRIN), which is the basis for long-term value creation for the company. Meanwhile, VBM provides a framework for measuring and managing a company's performance based on the value created by those resources. The combination of these two approaches helps companies optimize the use of resources and accurately measure how those resources contribute to economic value creation. For example, VBM can identify and allocate investments in innovation and relationship *capital*, which are essential strategic resources from the RBV perspective. In the era of digitalization, the use of technology such as *big data* and *artificial intelligence* is increasingly increasing the benefits of VBM in data-driven decision-making. This technology allows companies

to analyze more complex and diverse information and forecast market trends relevant to long-term value creation.

Value-Based Management in the Era of Industrial Revolution 4.0

Value-Based Cost Management (VBM) is a management approach that focuses on creating long-term value for the company and its shareholders (Chatterjee et al., 2021). In the Industrial Revolution 4.0 era, VBM faces new challenges and opportunities, especially in optimizing digital technology and more comprehensive data analysis (Ghobakhloo, 2018). Industrial Revolution 4.0, which is characterized by technological advances such as the Internet of Things (IoT), Big Data, Artificial Intelligence (AI), and *Cyber-Physical Systems* (CPS), has created a highly dynamic and complex environment where cost management and business strategy require a more adaptive approach (Khin & Kee, 2022)). In this digital era, VBM allows companies to leverage technology more effectively in strategic decision-making and cost management. Implementation of IoT, AI, and *Big Data* in business processes provides more comprehensive real-time data, which can be used to identify efficiency opportunities and increase productivity. Value-based cost management also allows companies to forecast more accurately related to market trends, estimate production needs, and assess operational risks through in-depth data analysis (Ivanov et al., 2020). Therefore, with the integration of digital technology, companies can accelerate more accurate and efficient data-driven decision-making (Nisar et al., 2020). For example, the use of Cyber-Physical Systems (CPS) in the supply chain allows interaction between physical devices and digital data, so that the process of controlling costs and monitoring performance can be carried out automatically and more transparently.

Furthermore, the Industrial Revolution 4.0 significantly changed how companies run their strategic management (Chatterjee et al., 2021). In the context of VBM, traditional approaches that rely solely on financial information must now be integrated with relevant non-financial data, such as operational data, market analysis, and technology risk. This is based on the Resource-Based View (RBV) theory, which emphasizes that internal resources, including technology, can be a sustainable competitive advantage if utilized well. In RBV, a resource that is valuable, rare, inimitable, and Non-substitutable (VRIN) is considered the key to creating a sustainable competitive advantage. In the Industrial Revolution 4.0 era, digital technologies such as IoT and AI have become necessary strategic resources in the VBM process (Fattah, 2024). These technologies enable companies to efficiently collect, analyze, and use data to support value-oriented decision-making processes. Thus, value-based cost management can help companies identify the most effective strategies in increasing company value through digital technology.

The Resource-Based View (RBV) theory is relevant in applying VBM in the era of the Industrial Revolution 4.0 because it emphasizes the importance of internal resources in creating a sustainable competitive advantage. Digital technologies such as IoT, *Big Data*, and AI can be considered valuable, *rare*, and *intangible* resources, allowing companies to utilize information more efficiently and improve business performance. Further, by integrating such technology into the VBM process, companies can strengthen management capabilities and optimize the use of their internal resources. This is in line with the RBV principle, which emphasizes that companies must leverage their resources to create long-term value for shareholders. Successful implementation of

VBM in this digital era also requires companies to continue innovating and adapting to technological changes to maintain their competitive advantage.

Challenges of Implementing *Value-Based Management* in Companies

Implementing Value-Based Management (VBM), which focuses on creating long-term value for shareholders, faces various significant challenges in the modern enterprise. These challenges are related to organizational, technological, and human resource factors. They are relevant to the Resource-Based View (RBV) theory, which emphasizes managing a company's internal resources. The implementation challenges of VBM are as follows:

- **Organizational Complexity:** One of the main challenges in implementing VBM is organizational complexity. In large companies with many business units and diverse structures, VBM implementation is often hampered by the difficulty of integrating value into all levels of management (Alamäki & Korpela, 2021). This results in difficulty measuring the value generated by each business unit accurately and consistently. In the context of the theory of Resource-Based View (RBV), this complexity can hinder companies from maximizing the use of internal resources that should be able to create value if adequately optimized. The solution to this challenge is implementing a more adaptive and decentralized organizational structure, where each business unit can manage its resources based on clear value metrics. This allows companies to be more flexible in managing diverse resources, following the RBV principle that companies must utilize valuable, rare, inimitable, and Non-substitutable (VRIN).
- **Readiness of Technology and Information Systems:** Another significant challenge is the readiness of technology and information systems. Many companies, especially in the SME sector, do not yet have adequate digital infrastructure to support the implementation of VBM. Technology integration, such as Big Data, the Internet of Things (IoT), and machine learning, are becoming increasingly essential to support more accurate and *Real-time* (Nisar et al., 2020). However, companies that do not have the right technology will experience limitations in collecting and analyzing the data necessary for value-based decision-making. In the context of RBV, this technology can be considered a strategic resource that can potentially create a competitive advantage. Therefore, companies need to invest in relevant technologies to maximize the use of data and support the VBM process. Companies can better manage existing resources and create value by improving technology capabilities.
- **Human Resource Limitations:** Limitations in human resource skills and capabilities are also an essential challenge in implementing VBM (Ozemre & Kabadurmuş, 2020). Many managers and employees may not profoundly understand VBM concepts or how to apply them in daily practice. Lack of training and awareness of the importance of long-term value creation can lead to resistance to change or half-hearted implementation. Theory Resource-Based View emphasizes the importance of human resource capabilities as a critical element in creating competitive advantages. Therefore, to address these challenges, companies must invest in human resource development through ongoing training and management empowerment to understand how VBM can be used to improve performance and create long-term value (Ozemre & Kabadurmuş, 2020).
- **Resistance to Change:** Resistance to change often arises due to uncertainty and a lack of understanding of the benefits of VBM (Hani & Dagnino, 2020). Managers used to

traditional performance measurement may be reluctant to adopt value-based metrics, as they see them as concepts that are too theoretical or irrelevant to daily operations. This resistance can be exacerbated by an organizational culture more oriented towards achieving short-term goals than long-term value creation (Barney et al., 2021). Therefore, to overcome this, companies need to clearly communicate the strategic benefits of VBM and provide incentives that align with long-term value creation. In the context of RBV, companies must build dynamic capabilities that allow them to adapt to the changing business environment and utilize internal resources more effectively.

CONCLUSION

The conclusions of the research that are adjusted from the results and discussion, as well as the formulation of the problem, are as follows:

- Value-Based Management (VBM) focuses on creating long-term value for shareholders by integrating financial and non-financial information into decision-making. The implementation of VBM helps companies improve financial performance by optimizing resource allocation. Within the framework of the Resource-Based View (RBV) theory, VBM allows companies to utilize valuable, rare, inimitable, and non-substitutable (VRIN) strategic resources so that companies can focus on value creation. With VBM, decision-making is more data-driven, covering capital allocation, risk management, and business strategy, which supports sustainable competitive advantage.
- In the Industrial Revolution 4.0 era, VBM is increasingly relevant in supporting strategic decision-making by utilizing technologies such as the Internet of Things (IoT), Big Data, and Artificial Intelligence (AI). This technology provides comprehensive, real-time data, allowing companies to conduct more accurate forecasting and identify efficiency opportunities. VBM, in the era of digitalization, enables the integration of financial and non-financial data, which supports increased productivity and more precise risk assessment. In the context of RBV, digital technology is a strategic resource that can create a competitive advantage if utilized optimally. Value-based cost management helps companies identify effective strategies through technology, which contributes to the company's sustainability.
- The main challenges of VBM implementation include organizational complexity, technological readiness, human resources, and resistance to change. Organizational complexity often hinders the integration of VBM across management levels, especially in large companies with many business units. Technology readiness is also a challenge, especially for companies that do not yet have a digital infrastructure that supports the application of big data and IoT technologies. Poorly trained human resources and a low understanding of VBM can also hinder effective implementation. Resistance to change arises because managers accustomed to traditional performance measurement tend to be reluctant to adopt VBM. To overcome these challenges, companies must develop technological capabilities, human resources, and adaptive organizational structures following RBV principles to apply VBM optimally and sustainably.

REFERENCE

- Abad-Segura, E., & González-Zamar, M.-D. (2020). Research Analysis on Emerging Technologies in Corporate Accounting. In *Mathematics* (Vol. 8, Issue 9). <https://doi.org/10.3390/math8091589>
- Alamäki, A., & Korpela, P. (2021). Digital Transformation and Value-Based Selling Activities: Seller and Buyer Perspectives. *Baltic Journal of Management*, 16(2), 298–317. <https://doi.org/10.1108/bjm-08-2020-0304>
- Astuti, E., Suhadak, Rahayu, S. M., & Wilopo. (2018). The influence of information technology strategy and management support to the internal business process, competitive advantage, financial and non-financial performance of the company. *International Journal of Web Information Systems*, 14(3), 317–333. <https://doi.org/10.1108/IJWIS-11-2017-0079>
- Barney, J. B., Ketchen, D. J., & Wright, M. (2021). Resource-Based Theory and the Value Creation Framework. *Journal of Management*, 47(7), 1936–1955 <https://doi.org/10.1177/01492063211021655>
- Battilana, J., Oblój, T., Pache, A.-C., & Sengul, M. (2022). Beyond Shareholder Value Maximization: Accounting for Financial/Social Trade-Offs in Dual-Purpose Companies. *Academy of Management Review*, 47(2), 237–258 <https://doi.org/10.5465/amr.2019.0386>
- Chang, L., Feng, Y., Lin, D., Wu, L., & Guo, M. (2020). Iot Based Laundry Services: An Application of Big Data Analytics, Intelligent Logistics Management, and Machine Learning Techniques. *International Journal of Production Research*, 58(17), 5113–5131. <https://doi.org/10.1080/00207543.2019.1677961>
- Chatterjee, S., Rana, N. P., & Dwivedi, Y. K. (2021). How Does Business Analytics Contribute to Organisational Performance and Business Value? A Resource-Based View. *Information Technology and People*. <https://doi.org/10.1108/itp-08-2020-0603>
- D'Oria, L., Crook, T. R., Ketchen, D. J., Sirmon, D. G., & Wright, M. (2021). The Evolution of Resource-Based Inquiry: A Review and Meta-Analytic Integration of the Strategic Resources–Actions–Performance Pathway. *Journal of Management*, 47(6), 1383–1429. <https://doi.org/10.1177/0149206321994182>
- Fattah, I. A. (2024). Decision Making Performance of Business Analytics Capabilities: The role of Big Data Literacy and Analytics Competency. *Business Process Management Journal*, 3(6), 2096–2126. <https://doi.org/10.1108/bpmj-11-2023-0894>
- Freeman, R. E., Dmytriiev, S., & Phillips, R. A. (2021). Stakeholder Theory and the Resource-Based View of the Firm. *Journal of Management*, 47(7), 1757–1770. <https://doi.org/10.1177/0149206321993576>
- Gerhart, B., & Feng, J. (2021). The Resource-Based View of the Firm, Human Resources, and Human Capital: Progress and Prospects. *Journal of Management*, 47(7), 1796–1819. <https://doi.org/10.1177/0149206320978799>

- Ghasemi, R., Azmi Mohamad, N., Karami, M., Hafiz Bajuri, N., & Asgharizade, E. (2016). The mediating effect of management accounting system on the relationship between competition and managerial performance. *International Journal of Accounting and Information Management*, 24(3), 272–295. <https://doi.org/10.1108/IJAIM-05-2015-0030>
- Ghobakhloo, M. (2018). The Future of Manufacturing Industry: A Strategic Roadmap Toward Industry 4.0. *Journal of Manufacturing Technology Management*, 29(6), 910–936. <https://doi.org/10.1108/jmtm-02-2018-0057>
- Gunarathne, N., Lee, K. H., & Kaluarachchilage, P. K. H. (2020). Institutional Pressures, Environmental Management Strategy, and Organizational Performance: The Role of Environmental Management Accounting. *Business Strategy and the Environment*, 30(2), 825–839. <https://doi.org/10.1002/bse.2656>
- Hani, M., & Dagnino, G. B. (2020). Global Network Coopetition, Firm Innovation and Value Creation. *Journal of Business and Industrial Marketing*, 36(11), 1962–1974. <https://doi.org/10.1108/jbim-05-2019-0268>
- Hristov, I., Camilli, R., Chirico, A., & Mechelli, A. (2022). The Integration Between Enterprise Risk Management and Performance Management System: Managerial Analysis and Conceptual Model to Support Strategic Decision-Making Process. *Production Planning & Control*, 35(8), 842–855. <https://doi.org/10.1080/09537287.2022.2140086>
- Ivanov, D., Tang, C. S., Dolgui, A., Battini, D., & Das, A. (2020). Researchers' Perspectives on Industry 4.0: Multi-Disciplinary Analysis and Opportunities for Operations Management. *International Journal of Production Research*, 59(7), 2055–2078. <https://doi.org/10.1080/00207543.2020.1798035>
- Khanra, S., Kaur, P., Joseph, R. P., Malik, A., & Dhir, A. (2021). A Resource-based View of Green Innovation as a Strategic Firm Resource: Present Status and Future Directions. *Business Strategy and the Environment*, 31(4), 1395–1413. <https://doi.org/10.1002/bse.2961>
- Khin, S., & Kee, D. M. H. (2022). Factors Influencing Industry 4.0 Adoption. *Journal of Manufacturing Technology Management*, 33(3), 448–467. <https://doi.org/10.1108/jmtm-03-2021-0111>
- Mahlendorf, M. D., Martin, M. A., & Smith, D. (2023). Innovative Data – Use-cases in Management Accounting Research and Practice. *European Accounting Review*, 32(3), 547–576 <https://doi.org/10.1080/09638180.2023.2213258>
- Manurung, S., Hartoto, H., Priantana, R. D., Fuadi, R., Daud, R. M., Nugroho, L., Maryasih, L., Lautania, M. F., Jefriyanto, J., Meutia, R., Bangun, R., Yulistiyono, A., Ariani, N. E., Djuanda, G., & Chania, I. (2022). MANAGEMENT ACCOUNTING. In G. Djuanda (Ed.), *CV WIDINA MEDIA UTAMA*. CV WIDINA MEDIA UTAMA.
- Nason, R. S., & Wiklund, J. (2015). An Assessment of Resource-Based Theorizing on Firm Growth and Suggestions for the Future. *Journal of Management*, 44(1), 32–60.

<https://doi.org/10.1177/0149206315610635>

- Nisar, Q. A., Nasir, N., Jamshed, S., Naz, S., Ali, M., & Ali, S. (2020). Big Data Management and Environmental Performance: Role of Big Data Decision-Making Capabilities and Decision-Making Quality. *Journal of Enterprise Information Management*, 34(4), 1061–1096. <https://doi.org/10.1108/jeim-04-2020-0137>
- Nugroho, L., Fajarsari, I. M., Solikin, A., Yusdita, E. E., Fatriansyah, A. I. A., Irwanto, I., Atiningsih, S., Susilawati, N., Gainau, P. C., Hippy, M. Z., Rahmadi, H., Januarsi, Y., & Faisol, I. A. (2023). Accounting Research Methodology and Practice of Writing Articles in the Field of Accounting. In N. Rismawati (Ed.), *Widina Bhakti Persada*. Widina Bhakti Persada Bandung.
- Nurmala Dewi, R., & Puspitasari, W. (2023). Implementation of Accounting Management System in Decision Making. *Journal of Economics and Business Ubs*, 2(6), 3402–3411. <https://doi.org/10.52644/joeb.v2i6.673>
- Ozemre, M., & Kabadurmuş, Ö. (2020). A Big Data Analytics Based Methodology for Strategic Decision Making. *Journal of Enterprise Information Management*, 33(6), 1467–1490. <https://doi.org/10.1108/jeim-08-2019-0222>
- Paula Monteiro, A., Vale, J., Leite, E., Lis, M., & Kurowska-Pysz, J. (2022). The impact of information systems and non-financial information on company success. *International Journal of Accounting Information Systems*, 45, 100557. <https://doi.org/https://doi.org/10.1016/j.accinf.2022.100557>
- Pedroso, E., Gomes, C. F., & Yasin, M. M. (2020). Management accounting systems: an organizational competitive performance perspective. *Benchmarking: An International Journal*, 27(6), 1843–1874. <https://doi.org/10.1108/BIJ-12-2019-0547>
- Randers, J. (2012). Greenhouse gas emissions per unit of value added ("GEVA") — A corporate guide to voluntary climate action. *Energy Policy*, 48, 46–55. <https://doi.org/https://doi.org/10.1016/j.enpol.2012.04.041>
- Rehman, S. U., Bresciani, S., Ashfaq, K., & Alam, G. M. (2021). Intellectual Capital, Knowledge Management and Competitive Advantage: A Resource Orchestration Perspective. *Journal of Knowledge Management*, 26(7), 1705–1731. <https://doi.org/10.1108/jkm-06-2021-0453>
- Setiawan, A. S., & Rahmawati, R. (2017). RELATIONSHIP OF STAR RATINGS TO THE ROLE OF STRATEGIC MANAGEMENT ACCOUNTING (Empirical Study on Hotel Companies in South Sumatra). *Journal of Accounting*, 21(1), 114. <https://doi.org/10.24912/ja.v21i1.137>
- Shi, W. (2021). Analyzing enterprise asset structure and profitability using cloud computing and strategic management accounting. *PloS One*, 16(9), e0257826. <https://doi.org/10.1371/journal.pone.0257826>
- Tripathi, P. M., Chotia, V., Solanki, U., Meena, R., & Khandelwal, V. (2023). Economic Value Added Research: Mapping Thematic Structure and Research Trends. In *Risks* (Vol. 11, Issue 1). <https://doi.org/10.3390/risks11010009>

- Wyatt, A. (2008). What financial and non-financial information on intangibles is value-relevant? A review of the evidence. *Accounting and Business Research*, 38(3), 217–256. <https://doi.org/10.1080/00014788.2008.9663336>
- 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. <https://doi.org/10.1177/01492063211018505>
- Zhu, X., Yu, S., & Yang, S. (2022). Leveraging Resources to Achieve High Competitive Advantage for Digital New Ventures: An Empirical Study in China. *Asia Pacific Business Review*, 29(4), 1079–1104. <https://doi.org/10.1080/13602381.2022.2015955>