



The impact of management accounting development on business intelligence with regard to the mediating role of decision type and environment

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Abstract

With the expansion of competition and the increasing complexity of organizational environments, the role of timely information and intelligent decision-making has become increasingly important. In this regard, the present study aims to examine the effect of management accounting development on business intelligence, taking into account the mediating role of decision type and environment. The statistical population of this research consists of employees of industrial companies in Kerman Province, among whom 385 individuals were selected as the sample. This study is applied in nature and was conducted using a descriptive-survey method. Data were collected through library studies and a questionnaire, and all research hypotheses were tested at a significance level of 0.05. Data analysis was performed using SPSS version 20. The findings revealed that data quality and flexibility have a positive and significant effect on business intelligence success. In addition, decision type acts as a mediating variable in the relationship between management accounting development and the dimensions of business intelligence. The results indicate that by applying advanced management accounting principles, organizations can enhance their level of business intelligence maturity through improved decision-making processes. The novelty of this research lies in the conceptual integration of the decision and environment variables in the model examining the impact of management accounting on business intelligence, which has received limited attention in prior literature.

Keywords: Management Accounting, Business Intelligence, decision Making, Organizational Environment.

JEL Classification: M41, M42, O30.

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INTRODUCTION

Nowadays, financial organizations are seeking innovative methods to strengthen their competitive position and optimize decision-making processes. Artificial intelligence, as one of the most advanced technologies in this field, plays an indispensable role ([Barzegar & Jahani, 2025](#)). In recent decades, organizations have faced a dynamic, complex, and competitive environment in which accurate, data-driven decision-making plays a key role in success. In such a context, business intelligence, as a modern tool for data collection, processing, and analysis, helps organizations gain a deeper understanding of their past and present conditions and make more strategic decisions. On the other hand, management accounting, which lies at the heart of organizational decision-making processes, can provide a suitable basis for strengthening business intelligence through the development of concepts such as data quality, flexibility, analytical technologies, and the role of information in decision-making. Artificial intelligence also contributes to enhancing organizational sustainability ([Zarei Mahmoudabadi & Torkzaban, 2026](#)). Business intelligence can improve the efficiency and effectiveness of accounting professionals, especially in areas such as auditing and management accounting, thereby facilitating better decision-making. In addition, this technology encourages accountants and financial managers to pay greater attention to the role of information technology in the development of management accounting and to use it for improving the quality of decisions and adapting better to the organizational environment ([Saadati et al., 2025](#)). Moreover, investment in artificial intelligence technologies can create a fundamental transformation in financial and operational management within organizations ([Darabi & Dowlatsahi, 2025](#)). However, a review of prior research in the field of management accounting and information systems shows that the relationship between the development of management accounting and the success of business intelligence, especially considering the mediating role of contextual factors such as decision type and environment, has received limited attention. This research gap highlights the need for a more precise examination of how the advanced dimensions of management accounting influence the performance of business intelligence systems. The main innovation of this study lies in the fact that, instead of examining only the direct relationship between the development of management accounting and business intelligence, it analyzes this relationship within a multidimensional conceptual model and by considering the mediating role of decision type and environmental conditions. In most previous studies, management accounting and business intelligence have been examined separately or within linear relationships; however, this study seeks to show that the real effect of management accounting development emerges through improved decision quality and better adaptation to the organizational environment, which in turn enhance business intelligence success. Accordingly, simultaneous attention to technical, decision-oriented, and environmental dimensions is the main distinguishing feature of this study. The literature review indicates that although numerous studies have been conducted on management accounting, information technology, business intelligence, and decision-making, few studies have examined the relationship among these variables within an integrated framework and with emphasis on the mediating role of decision type and environment. In particular, in domestic research and even in many international studies, the main focus has been on the technical infrastructure of business intelligence or management accounting tools, while less attention has been paid to how managerial decision types and organizational environmental characteristics can moderate or explain this relationship. Therefore, the existing gap in the literature necessitates a study that empirically and systematically examines this conceptual link. The importance of this study stems from the fact that organizations operating in competitive and dynamic environments must rely on efficient information systems and data-driven decision-making to survive and succeed. The development of management accounting can; by providing accurate, timely, and reliable information, help enhance business intelligence and improve the quality of managerial decisions. At the same time, changing and complex environmental conditions require organizations to redesign their analytical and decision-making mechanisms in accordance with environmental contingencies. Based on this, the findings of this study can be practical and useful for managers, management accountants, and organizational policymakers in improving the use of information technology, strengthening business intelligence, and increasing the effectiveness of managerial decisions.

METHODOLOGY

This study is applied in terms of its objective and descriptive-survey in terms of its methodology. Descriptive-survey studies focus on describing characteristics, examining relationships among variables, and analyzing the current situation; therefore, they are suitable for studies that seek to explain the effects of variables on one another. In this study, the effect of management accounting development on business intelligence, considering the mediating role of decision type and environment, was examined. The statistical population of the study consisted of industrial companies in Kerman Province. To determine the sample size, Cochran's formula was used, and 385 respondents were selected as the sample. The subject scope of the study includes management accounting development, business intelligence, decision type, and organizational environment. The spatial scope of the study is Kerman Province, and the temporal scope is the year 2023.

RESULTS

The research findings showed that data quality and flexibility both have a positive and significant effect on the success of business intelligence. This result indicates that the more accurate, complete, and reliable the organization's information system is, and the greater the organization's ability to adapt and remain flexible in response to environmental changes, the higher the likelihood of business intelligence success. In contrast, the results showed that the mediating role of decision type in the relationship between data quality and business intelligence success is not significant, whereas it is significant in the relationship between flexibility and business intelligence success. This finding suggests that decision-making type, especially in dynamic and changing conditions, can play an important role in transforming organizational flexibility into business intelligence success. From a theoretical perspective, these results confirm that the success of business intelligence depends not only on technical or informational capacities, but also on how information is used in the decision-making process and on the organization's readiness to respond to its environment. Therefore, management accounting development can lead to tangible outcomes in the field of business intelligence only when appropriate mechanisms exist both at the data level and at the decision and environmental levels. This highlights the importance of a systemic and integrated perspective on management accounting and business intelligence.

CONCLUSION

Based on the findings, it can be concluded that management accounting development, through improving data quality and enhancing the organization's ability to deal with environmental conditions, provides the basis for increasing business intelligence success in organizations. It was also found that decision type can play an effective mediating role in some pathways, while such an effect is not observed in others. Therefore, the effect of management accounting on business intelligence is neither uniform nor linear; rather, it depends on the nature of decisions and environmental characteristics. In other words, business intelligence will be most effective when it operates within an advanced management accounting system and is supported by decision-making that is appropriate and aligned with the organizational environment. Overall, this research shows that the success of business intelligence is not achieved merely through investment in technology; rather, it requires the simultaneous development of information infrastructure, managerial decision-making, and environmental adaptability. Accordingly, managers should note that improving management accounting, enhancing data quality, and strengthening organizational flexibility are among the key factors in the success of business intelligence systems.

Contribution of Authors

All authors participated in the process of writing the article, collecting data, and analyzing it.

Ethical Approval

All stages of the research were conducted with the informed consent of the participants, and their information will remain confidential.

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Conflict of Interest

No conflict of interest has been declared by the authors.

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