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Research Article

The effect of Business Intelligence on Alignment with Performance Management and Strategy: A Meta-Analysis or Systematic Literature Review

Ms Martha Namutuwa^{1*}, Prof Nikodemus Angula ²

1,2 Namibia University of Science and Technology

Corresponding Author: * MS Martha Namutuwa

Abstract

Business Intelligence (BI) is viewed to have the potential to contribute to the effectiveness of performance management and strategy; however, its alignment with performance management and strategy appears to be fragmented and underexplored as an emerging field of business research. As a result, the performance system and business strategic goals implementation are compromised due to the lack of knowledge of how BI tools can be applied. Hence, this paper has examined BI tools' alignment with performance management and organizational strategy. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) methodology was used in three stages to highlight the gaps in the current literature and identify the key research themes for the study meta-analysis to be conducted. Data were sourced from secondary literature resources on business intelligence, performance, and strategy published between 2017 and 2024, and reviewed and synthesized from Scopus, Web of Science, Google Scholar, and EBSCO databases. The reviewed empirical study's findings were consolidated and offered insight into how BI improves performance management processes and attainment of strategic objectives. The findings informed BI tools support performance and strategy, which influence productivity and goal attainment. Thus, recommendations for future research on BI tools to support people management and business development.

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KEYWORDS: business intelligence, performance management, strategy and tools.

INTRODUCTION

In today's rapidly changing business landscape, businesses intend to achieve the goals of their strategy by managing performance, but this is a challenge that requires an innovative approach. Given that challenge, Business Intelligence (BI) has emerged as a critical tool, which is viewed to have the potential to navigate business challenges (Mekimah, Zighed, Mili & Bengana, 2024). BI is a tool developed for data analysis and information systems, and it has evolved by harnessing data and analytics that support improving competitive advantage and operational efficiency of organisations (Magguilei, Issami, Machrafi & Charqaoui, 2024). BI is also interpreted extensively as overarching including the applications, infrastructure, and tools that enable access to information and analysis thereof to improve and enhance decision-making and performance (Charkaoui & Jabraoui, 2024). On the contrary strategy definition dating back to a century is grounded in the definition" strategy is an integrated set of choices that uniquely positions the organization to create sustainable advantage and superior value relative to the competition," anchored on the playing to win framework Lafley & Martin (2013). Strategy is observed to be comprehensive as it consists of processes, ecosystem reviewing, formulation and implementation of strategy, and performance evaluation (Magguilej et al., 2024). Organization leadership prioritized improving organizational performance through performance appraisal activities using existing information to improve business processes and achieve company goals (Wang, Omar, Alotaibi, Daradkeh & Lthubiti, 2022). Embedding BI and analytics increases the quality of managerial decisions and improves performance to understand the business (Hurbean, Militaru, Muntean, & Danaiata, 2023). In addition, Hurbean et al, (2023). indicated that studies conducted showed that the usage of business intelligence and analytics improves organisational performance. However, this study seeks to understand if BI has synergy with performance management and strategy.

Research aim

The main purpose of the study was to investigate the effect of Business Intelligence on alignment with Performance Management and Strategy, a meta-analysis.

Business Intelligence alignment with performance management and strategy appears to be fragmented and underexplored as an emerging field of business research. As a result, the performance system and business strategic goals implementation are compromised due to the lack of knowledge of how BI tools can be applied. Hence, this paper examines the BI tools' alignment with performance management and organizational strategy. This study aims to address this gap by conducting a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) methodology of BI research published between 2014 and 2024, as indexed in the SCOPUS database. Our research will use three stages to highlight the gaps in the current literature and identify the key research themes for the study meta-analysis to be conducted. The study is also attempted to answer the main research question and sub-research questions.

Main Research Question

How does Business Intelligence influence the alignment of performance management with organizational strategy?

Sub-Research questions:

- What is the relationship between performance management and organisational strategy? A meta-analysis."
- What is the relationship between the importance of Business Intelligence and the alignment of performance management with organisational strategy? A metaanalysis."

Hypothesis

- Null Hypothesis (H₀₁): There is no significant relationship between performance management and organisational strategy.
- Alternative Hypothesis (H₁₁): There is a significant relationship between performance management and organisational strategy.

Hypothesis 2

- Null Hypothesis (H₀₂): There is no significant relationship between the importance of Business Intelligence and the alignment of performance management with organisational strategy.
- Alternative Hypothesis (H₁₂): There is a significant relationship between the importance of Business Intelligence and the alignment of performance management with organisational strategy.

2. LITERATURE REVIEW

Theoretical literature

Theoretical Framework

Business Intelligence

Business Intelligence refers to the capacity to think logically, bring about change in the ecosystem were required deal effectively with business activities (Homsi, Ehab Kamal & Haikal, 2023). According to Nimer et al. (2023), BI is a tool that transforms data for the organization, that is analyzed for the benefits of making qualitative decisions based on the information analysis. On the other hand, business intelligence (BI) is described as a combination of computer systems and managerial processes to support decision-making (Chalmeta & Estevez, 2023). Business intelligence is defined as a method that creates different forms of organizational and technical tools that support the management of large amounts of data available in real time into useful information for decision-making (Żółtowski, 2022). BI is also explained as using the balanced scorecard tool for performance measurement and management control for financial and non-financial as well as short- and long-term measures. The balanced scorecard is a type of BI tool that allows strategy to be translated into action from four perspectives namely financial, customers, processes and training (Nuseir, 2021) and (Kaplan & Norton, 1996).

Performance Management

Managing performance is becoming an important area of focus as it integrates business functions with a long-term outlook. Bogdan, Felicia & Delia (2024) discussed that Performance Management is also referred to as Business Performance Management (BPM), corporate performance management (CPM), enterprise performance management (EPM), and strategic enterprise management (SEM), BPM Standards Group (2005). BPM is defined as "a framework for organizing, automating, and analyzing business methodologies, metrics, processes, and systems to drive the overall performance of the enterprise" Bogdan et al., 2024). It helps organizations translate a unified set of objectives into plans, monitor execution, and deliver critical insight to improve financial and operational performance. Performance management includes establishing compliance based on key performance indicators to an inclusive strategy using one of the well-known performance frameworks, Balanced Scorecard created by Kaplan & Norton, 1996), Manvillea & Great banks (2024). The performance management process involves different measurements through the performance evaluation important for organisational performance and competitive advantage (Hečková, Kubák, Marková, Chapčáková, Svetozarovová, & Kekaščáková, (2021). Most often organizations are battling to find effective performance management measurement tools, depending on the organizational strategy. However, performance measurement is known to be the underlying element that enhances strategy understanding and realization (Cirella & Lewandowski, 2022).

Strategy

Any functional organization is required to have a plan or a strategy that will steer it towards achieving its objectives in other words, having a strategy is vital for the competitive advantage of business success. strategy is explained as the process of evaluation of the external and internal environments, planning, and implementation designed to maintain and improve the business's competitive advantage (Sammut-Bonnici,2017). Strategy is a management process that starts with the evaluation of internal strengths and weaknesses, external opportunities and threats (SWOT). In addition, Sheldon, Tucci & Roy (2024) explained that strategic management consists of a process of planning, monitoring, analysis, and assessment of the resources and processes, and an organization that is ongoing to support the organization in meeting business goals and objectives.

The influence of Business Intelligence on performance management and strategy

In today's volatile and technologically advancing world, organizations need to embrace technology to work towards continuous development and data in all its forms and types, as it has become a vital source for the organization's ability to achieve performance effectively (Awad & Mahmoud, 2023). The adoption of Business Intelligence is regarded as critical in improving human resources practices among others performance management, BI tools can be utilized to evaluate employee performance data and detect areas for improvement, that can

inform training and development requirements to support and assist the organization better align employee performance with business strategic goals (Caddle, 2016; Xu et al, 2017; Hamdan et al, 2020) and Awad and Mahmoud (2023). According to Bogdana et al., Business Performance Management (BPM) can be considered as being the final component of business intelligence to improve the organizations that have business intelligence packages and custom applications, including: strategic performance management, enterprise analytics for tactical analysis, operational reports and analytics used to support operational decisions, however BI in itself cannot deliver the insight needed to improve overall business as BPM is more than technology as it is requiring decision support.

Empirical literature

This study, conducted by Khaddama et al. (2023), examining the mediating role of decision-making speed on the causal chain linking business intelligence and firm performance through the lens of contextualizing the role of people-BI tools fit on the causal link between business intelligence and decision-making speed. The study employed a moderated-mediated model using a random sample of 236 responses in various Jordanian organizations, and data were analyzed using a partial least squares structural equation modeling technique. The study targets more than 400 firms but due to company policies, financial constraints, decline to participate, and lack of social connections, in total 65 firms in various sectors (i.e. IT and telecommunications, health, mining, construction, medical, ecommerce, insurance and finance, oil, energy, and gas) agreed to participate in the study. The findings revealed that BI enables and improves decision-making speed, which promotes higher business performance. In addition, the study found that decisionmaking speed facilitates the causal relationship between business intelligence and firm performance.

Charkaoui & Jabraoui (2024) conducted a 20 bibliometric analysis study on how data analytics is applied to generate crucial information supporting business decision-making and has been a significant domain for over three decades Years of Scientific Study Business intelligence (BI) and Decision-Making Performance: comprehensive overview of the knowledge generated and disseminated in previous investigations related to the intricate relationship between BI and decision-making performance (DMP) over the past 20 years. The study utilized an R tool, namely Bibliometric, which supports a suggested workflow for conducting bibliometrics and includes descriptive as well as knowledge structure analysis was used on a dataset containing 1,484 English-language articles published between 2003 and 2023 and indexed in Web of Science databases. The findings showed that few studies use decision theory and further investigations are required to fully understand how BI impacts the decision making on performance inside and outside organizational boundaries. Based on the results, BI studies tend to be practical-oriented rather than focusing on tools for effective use and competencies that might improve decision quality.

The study conducted by Mekimah et al. (2024) examined how Business Intelligence (BI) research impacted organizational

decision-making. The study used a bibliometric analysis methodology by 2442 BI from the Scopus database published between 2014 and 2024, identified key trends, influential authors, leading institutions, and significant research gaps. The study found a significant under-exploration in integrating BI with competitive intelligence, decision-making processes, data mining, and human resources management. In addition, the research provided the direction for future research to enhance the application of BI in organizational decision-making and strategic development.

Moussas, Hafiane & Achaba's (2024) study focused on how Business intelligence plays its role in organizational performance. The study examined how the role of Business Intelligence (BI) in organizational decision-making is critical through a literature review that provided an inclusive understanding of BI in its multifaceted form and its potential in enhancing organizational performance. The study utilised a systematic literature review methodology, analysed peer-reviewed articles, case studies, and seminal works in the field of

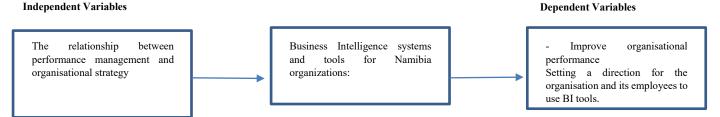
Business Intelligence, focusing on key themes, namely, BI's components, its role in strategic decision-making, operational efficiency, metrics, and Key Performance Indicators (KPIs) influenced by BI. The sample sizes for the analyzed studies range from smaller focus groups to large organisational surveys. Notably, the study found that BI affects strategic decision-making, improves operational efficiency, and impacts various metrics and KPIs in various sectors. The study further acknowledged that Business Intelligence is a vital tool for businesses, offering various functionalities in various industries that can enhance decision-making, operational efficiency, and competitive advantage to contributing to business success.

Theoretical Framework

Contingency theory and Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) theory provide a sound theoretical framework for understanding and responding to the complex usage of rapidly changing technological advances and the influence of Business Intelligence on Alignment with Performance Management and Strategy.

Conceptual Framework

Figure 1: The research is based on a conceptual framework that examines two key relationships: (1) the connection between performance management and organizational strategy through a meta-analytical approach, and (2) the relationship between the importance of Business Intelligence (BI) and the alignment of performance management with organizational strategy. The framework further explores how these relationships are interdependent and collectively contribute to enhancing strategic decision-making and organizational effectiveness.



Research Methodology - Materials and Methods

This study employed clearly defined criteria for selecting relevant materials and literature, focusing on the alignment of Business Intelligence (BI) tools with performance management and organizational strategy. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology was applied in three stages to systematically identify gaps in the existing literature and to extract key research themes for the meta-analysis. Secondary data sources, including peer-reviewed publications from 2017 to 2024, were drawn from major academic databases such as Scopus, Web of Science, and Google Scholar and EBSCO. These sources were thoroughly reviewed and synthesized. The consolidated findings from empirical studies provided insights into how BI tools contribute to

enhancing performance management processes and facilitating the achievement of strategic objectives. The results suggest that BI tools play a significant role in supporting both performance and strategy, thereby influencing overall productivity and goal attainment. Based on these insights, the study recommends further research into the role of BI tools in supporting people management and broader business development initiatives.

Summary of findings

The study sought to test the following hypotheses:

The table below provides a summary of the findings of the literature review.

No	Author / Date	Hypothesis	Finding	Decision Accept / Reject
1		H1	The present study found that there is no relationship between performance management and organizational strategy	Accept
2		Н2	The present study found that there is a relationship between the importance of Business Intelligence and the alignment of performance management with organizational strategy	Accept

Table 1: Summary of findings

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This section outlines the methodological steps undertaken in the course of this research. The primary objective of the study was to investigate the relationship between the perceived importance of Business Intelligence (BI) and the alignment of performance management with organizational strategy, based on a comprehensive review of existing literature relevant to the topic.

Summary of major findings

Khaddama et al. (2023) conducted a study exploring the mediating role of decision-making speed in the causal relationship between Business Intelligence (BI) and firm performance, with a particular focus on the contextual fit between people and BI tools. The authors employed a moderated mediation model, using data collected from a random sample of 236 respondents across various Jordanian organizations. The analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). Although the study initially targeted over 400 firms, only 65 organizations across diverse sectors-including IT and telecommunications, healthcare, mining, construction, e-commerce, insurance, and energyultimately participated due to company policies, financial limitations, and other barriers. The findings demonstrated that BI significantly enhances decision-making speed, which in turn positively influences business performance. Moreover, decisionmaking speed was found to mediate the relationship between BI and firm performance, underscoring the importance of the human-technology fit in leveraging BI effectively.

In a related effort, Charkaoui and Jabraoui (2023) conducted a bibliometric analysis over 20 years to assess how data analytics and Business Intelligence support decision-making processes. Using the Bibliometrix R-package, which facilitates both descriptive and structural analysis, the study examined 1,484 English-language articles published between 2003 and 2023 and indexed in the Web of Science database. The analysis revealed that although BI has been a prominent area of inquiry for decades, relatively few studies integrate decision theory to explore the nuanced impact of BI on decision-making performance (DMP). The authors concluded that BI research tends to be application-driven, with a strong focus on tools, while insufficient attention has been paid to the roles of user competencies, effective utilization, and decision quality of which are critical to enhancing performance outcomes.

Mekimah et al. (2024) further extended this inquiry by examining how BI research has influenced organizational decision-making over the last decade. Using a bibliometric

approach on a dataset of 2,442 publications from the Scopus database (2014–2024), the study identified key research trends, influential scholars, and existing gaps. The results highlighted a notable underrepresentation of studies that integrate BI with competitive intelligence, data mining, decision-making processes, and human resource management. The authors emphasized the need for future research to bridge these gaps and promote the strategic integration of BI in various organizational functions to enhance decision-making and competitive advantage.

5. DISCUSSION

The study by Moussas, Hafiane, and Achaba (2024) contributes valuable insights into the evolving role of Business Intelligence (BI) in enhancing organizational performance. By employing a systematic literature review approach, the authors synthesized findings from a range of peer-reviewed articles, case studies, and foundational works in the BI field. Their analysis focused on several key themes, including the core components of BI systems, their influence on strategic decision-making, improvements in operational efficiency, and the impact of BI on metrics and Key Performance Indicators (KPIs).

The discussion highlights that BI systems play a pivotal role in supporting organizations' strategic goals. Across the reviewed literature—spanning small focus group studies to large-scale organizational surveys—evidence consistently pointed to BI's capacity to inform data-driven decisions, optimize internal processes, and enhance real-time performance monitoring through the use of KPIs. These findings are particularly relevant in sectors where timely and accurate insights are critical for maintaining competitiveness.

Moreover, the study underscores that the value of BI extends beyond technical capabilities; it is a strategic asset that, when effectively integrated, contributes to sustained business success. The authors argue that the widespread applicability of BI across various industries reinforces its importance as a tool for gaining competitive advantage, streamlining operations, and improving both tactical and strategic outcomes.

6. CONCLUSION

In conclusion, the findings support the growing consensus in the literature that BI is not merely an IT function but a crossfunctional enabler of performance improvement. The study invites further empirical research to examine how organisational context, user competencies, and BI adoption maturity levels affect the realisation of these benefits.

Limitations of the present study

The scope of the study was limited to literature examining the relationship between the importance of Business Intelligence (BI) and the alignment of performance management with organizational strategy. Data were obtained exclusively from secondary sources, including peer-reviewed publications on BI, performance, and strategy published between 2017 and 2024. These materials were systematically collected and synthesized from leading academic databases such as Scopus, Web of Science, Google Scholar, and EBSCO.

Areas for further research

The study recommends that future researchers explore the factors not addressed in this investigation. Additionally, areas that were excluded from this study should be considered in subsequent research, particularly about the importance of Business Intelligence (BI) and its role in aligning performance management with organizational strategy.

Summary, Conclusions, and Recommendations

The study conducted by Moussas, Hafiane, and Achaba (2024) provides important insights into the evolving role of Business Intelligence (BI) in improving organizational performance. Through a comprehensive systematic literature review, the authors synthesized findings from a wide range of peer-reviewed articles, case studies, and seminal works in the field of BI. The study highlights several critical themes, including the core components of BI systems, their impact on strategic decision-making, their potential to enhance operational efficiency, and their influence on metrics and Key Performance Indicators (KPIs). The findings underscore the value of BI as an essential tool for organizations seeking to optimize performance across various operational and strategic dimensions.

Recommendations

Based on the insights gathered, future research should further explore the specific mechanisms through which BI systems influence strategic decision-making and the alignment of performance management with organizational goals. Additionally, researchers are encouraged to examine the integration of BI with other organisational systems and explore how BI can be leveraged to drive continuous improvements in performance metrics and KPIs. Finally, future studies should consider industry-specific applications of BI and its role in enhancing competitiveness, ensuring that BI's full potential is realised in diverse organizational contexts.

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REFERENCES

- 1. Awad H, Mahmoud Y. Impact of Business Intelligence (BI) on E-HRM Practices Within NGOs in Jordan. 2023. DOI: 10.47750/OAS/25.200.02.
- Bogdana PI, Felicia A, Delia B. The Role of Business Intelligence in Business Performance Management. 2024. Available from: https://core.ac.uk/download/pdf/6303951.pdf.
- 3. Charkaoui A, Jabraoui S. 20 Years of Scientific Study on Business Intelligence and Decision-Making Performance: A Bibliometric Analysis. Inf Syst Eng Bus Intell. 2024;10(3):408-421. DOI: http://dx.doi.org/10.20473/jisebi.10.3.408-421.
- Chalmeta R, Estevez MF. Developing A Business Intelligence Tool for Sustainability Management. Bus Process Manag J. 2023;29(8). Available from: https://www.emerald.com/insight/1463-7154.htm.
- 5. Richards G, Yeoh W, Chong AYL, Popovič A. Business Intelligence Effectiveness and Corporate Performance Management: An Empirical Analysis. J Comput Inf Syst. 2019;59(2):188-196. DOI: https://doi.org/10.1080/08874417.2017.1334244.
- 6. Hisham A, et al. Model for Dynamic Business Process Integration and Visualization Using Business Intelligence and SOA. J Syst Manag Sci. 2024. DOI: https://doi.org/10.33168/JSMS.2024.0113.
- 7. Homsi D, Kamal E, Haikal EK. Analysis of Jordanian Commercial Banks' Business Intelligence Systems and Their Emphasis on Entrepreneurship. Gen Manag Qual. 2023;24(196):124. Available from: https://research.ebsco.com/c/pmqana/viewer/pdf/lbghjosttj.
- 8. Hurbean L, Militaru F, Muntean M, Danaiata D. The Impact of Business Intelligence and Analytics Adoption on Decision Making Effectiveness and Managerial Work Performance. Sci Ann Econ Bus. 2023;70(SI):43-54. DOI: https://doi.org/10.47743/saeb-2023-0012.
- 9. Khaddama A, Alzghoula A, Abusweilem MA, Abousweilem CF. Business Intelligence and Firm Performance: A Moderated-Mediated Model. Serv Ind J. 2023;43(NOS):13-14. DOI: https://doi.org/10.1080/02642069.2021.1969367.
- 10. Lafley AG, Martin RL. Playing to Win: How Strategy Really Works. Ebook. Harvard Business Review Press; 2013.
- 11. Manvillea G, Greatbanksb R. Institutional Isomorphism and Performance Management: Exploring the Linkage and Relationship in English Social Housing. Housing Stud. 2024;39(10):2626–2653.
- 12. Magguilej D, Issami J, Machrafi M, Charqaoui M. Bibliometric Analysis of Business Intelligence and Strategic Management. In: BI and Strategic Management Book of Proceedings; 113th International Scientific Conference on Economic and Social Development; Prague; 2024.
- 13. Moussas K, Hafiane J, Achaba A. Business Intelligence and Its Pivotal Role in Organizational Performance: An Exhaustive Literature Review. J Auton Intell. 2024;7(4).

DOI: 10.32629/jai.v7i4.1286. Available from: https://jai.front-sci.com/index.php/jai/article/view/1286/847.

- Nuseir MT. Designing Business Intelligence (BI) for Production, Distribution and Customer Services: A Case Study of a UAE-Based Organization. Bus Process Manag J. 2021;27(4):1275-1295. DOI: 10.1108/BPMJ-06-2020-0266.
- 15. Ramirez-Aristzabal C, Oliveira Moraes RI, Popovic A. Business Intelligence Success Models: A Review, Consolidation and Expansion. Available from: https://doi.org/10.1080/12460125.2023.2222476.
- 16. Sheldon R, Tucci L, Roy M. Strategic Management.

 Available from:

 https://www.techtarget.com/searchcio/definition/strategic-management.
- 17. Wang J, Omar AH, Alotaibi FM, Daradkeh YI, Iqhubiti SA. Information Processing & Management Business Intelligence Ability to Enhance Organizational Performance and Performance Evaluation Capabilities by Improving Data Mining Systems for Competitive Advantage. Inf Process Manag. 2022;59(6).
- 18. Żółtowski D. Business Intelligence in Balanced Scorecard: Bibliometric Analysis. Peer-review under the responsibility of the scientific committee of KES International. In: 26th International Conference on Knowledge-Based and Intelligent Information & Engineering; 2022.

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ABOUT THE AUTHOR



Ms. Martha Namutuwa is a Lecturer in the Department of Governance and Management Sciences at the Namibia University of Science and Technology. She specializes in governance, management, and business intelligence, with a focus on the alignment of performance management strategies in organizational settings.