International Journal of Information Technology and Management
Vol. 19, Issue No. 1, February-2024, ISSN 2249-4510

DOI: https://doi.org/10.29070/vcm7m010

A Study on the Relationship of Business Intelligence and Business Performance Management

Ritigya Aggarwal [1] *

1. Student, Class 12th, Welham Girls School, Dehradun, Uttarakhand, India
ritigyaaggarwal0803@gmail.com

Abstract: In order for corporations to attach their operational and strategic targets with everyday activities, Business Performance Management (BPM) is a important challenge. By making it simpler to make educated decisions and provide useful data, this lets in for comprehensive overall performance management. Not most effective should an enterprise version and track its strategies for BPM to paintings, however it have to additionally model and tune its broader strategies and the assumptions that underpin those plans. Examining the methods, gear, and approaches that make up Business Process Management (BPM) is the number one goal of this newsletter. Along with providing a radical framework that integrates BI and company overall performance control, it will also check out the intrinsic relationship between BPM and BI. This all-encompassing technique to managing agency performance ensures that operational execution and strategic objectives are always in sync by means of promoting continuous improvement and adaptable plans via records-pushed analysis.

Keywords: Business Performance Management (BPM), Business Intelligence (BI), business procedures, strategy, integration

X

INTRODUCTION

Companies have come to realise in recent years that metrics-driven management is crucial to achieving their long-term objectives. In order to run their day-to-day operations, stay in compliance with rules, and make financial reporting easier, finance firms have access to a wealth of technology tools. Consolidating financial performance data, automating controls and compliance, and capturing and handling transactions are all functions of these systems. Data warehouses, which are subsequently used by sophisticated business intelligence systems, are fed to varying degrees by these technologies. As much as the DW process helps with bottom-up data extraction, it isn't great at top-down strategy enforcement for the business. Finance and IT teams are now working on integrating these systems to provide a unified source of performance data and analytical capabilities, which have been absent up to this point.

Enhancing the strategic role of the finance department has been a priority for early adopters of business performance management. This is mostly because banking system data is more trusted than data from other business systems, such as ERP or CRM. Achieving some aspect of performance management is possible in almost every major business function. Organisations will need to set up a suitable data platform and gather the relevant source data to do this. Furthermore, they need to make sure that the company's larger needs are considered while making strategic decisions. Nowadays, businesses of all sizes and in all sectors are under increasing pressure to comply with regulations, which means they must link their decision-making process

to their corporate performance. Business process management (BPM) is a viable option since it makes the most of current resources while coordinating various parts to achieve a shared objective. It helps businesses in taking their goals and strategies and turning them into plans. Then, they can monitor how well those plans are working, look for differences between the two, and adjust their goals and strategies accordingly.

Business overall performance control (BPM), corporate overall performance management (CPM), corporation overall performance management (EPM), and strategic business enterprise management are some of the names for overall performance control in commercial enterprise literature (SEM). Different words can be used, but they all imply the same aspect. According to the BPM Standards Group (2005), BPM is "a framework for the enterprise, automation, and evaluation of enterprise methodologies, metrics, methods, and structures with a view to enhance the overall performance of the organization." By facilitating the transformation of a unified set of targets into actionable strategies, tracking their execution, and offering insightful analysis, this era enables companies enhance their operational and monetary performance.

In cutting-edge enterprise environment, corporations are continuously trying to find strategies to enhance their performance that allows you to stay competitive and achieve lengthy-term sustainability. The speedy progress in technology and the growing intricacy of business settings have made it essential to embody advanced tools and methods to successfully manipulate and beautify corporate overall performance. Out of them, Business Intelligence (BI) and Business Performance Management (BPM) have turn out to be critical factors. Business Intelligence refers back to the methods and era hired by groups to examine information and control commercial enterprise statistics. Business intelligence (BI) solutions enable the conversion of unprocessed information into giant and sensible insights, for this reason enhancing decision-making strategies. Through the utilisation of enterprise intelligence (BI), organizations can also get a more profound comprehension of marketplace developments, client behaviour, and operational performance. This, in flip, facilitates greater informed strategic planning and execution.

Company Performance Management is a set of approaches, processes, and technology that organizations rent to gauge, oversee, and control their corporation overall performance. BPM encompasses the combination of strategic making plans, budgeting, forecasting, and overall performance monitoring to ensure that an enterprise's operations are consistent with its strategic goals. Efficient business system management (BPM) offers a based method for enterprises to methodically monitor key performance signs, pinpoint areas in want of enhancement, and execute important corrective measures. The convergence of Business Intelligence (BI) with Business Process Management (BPM) creates a strong synergy which can significantly augment an employer's ability to perform its strategic targets. Business Intelligence (BI) can provide information-driven insights that are critical for making knowledgeable selections. On the opposite hand, Business Process Management (BPM) gives a methodical method to converting these insights into practical strategies and operational improvements. This integration allows businesses to not most effective oversee their present overall performance however also foresee destiny problems and possibilities.

The objective of this research look at is to investigate the complex correlation between Business Intelligence and Business Performance Management. This have a look at ambitions to analyze the effect of integrating Business Intelligence (BI) and Business Process Management (BPM) on overall performance

control and organisational results, with the goal of improving effectiveness and reaching advanced consequences. This study will explore the fundamental tactics, strategies, and technologies that form the idea of both employer Intelligence (BI) and Business Process Management (BPM), emphasising their man or woman and collective effect on achieving agency achievement. In addition, this paper will gift a thorough framework for combining Business Intelligence (BI) with Business Process Management (BPM), demonstrating how an all-encompassing method may also offer a unified and coherent attitude of the company and allow ongoing enhancement of overall performance. Organisations may additionally optimise their strategic alignment, operational efficiency, and sustainable boom through comprehending the symbiotic hyperlink among Business Intelligence (BI) and Business Process Management (BPM). The goal of this studies is to decorate the current knowledge by means of giving treasured insights on the only strategies for combining Business Intelligence (BI) and Business Process Management (BPM). Additionally, realistic advice might be provided to assist businesses in optimising their overall performance control processes. This observe targets to emphasise the significance of a complete method to company overall performance management in the ever-changing and aggressive surroundings of modern-day commercial enterprise.

LITERATURE OF REVIEW

Khare et al. (2023) the goal of this studies is to create a System Dynamics (SD) version that evaluates the capacity benefits of enforcing Business Intelligence (BI) in a Japanese corporation that manufactures Printed Circuit Boards (PCB). The cause is to decide if making an investment in BI will decorate the company's operational and economic overall performance. The version was constructed with financial statements spanning from 2019 to 2021 and validated through area specialists. The findings indicated that enforcing Business Intelligence (BI) at a rate of 40% might lead to a widespread growth inside the corporation's internet profit and accumulated income. Specifically, the net income could rise by way of 25.77% and the accrued earnings would develop by way of 48.28%. The one-of-a-kind version become established with the aid of analysing the interconnections of variables and their relevance to real-global eventualities and this technique can be utilised in other sectors.

Tariq et al. (2023) Business intelligence has grown to be a vital problem in present day commercial enterprise research, with specific factors being examined in lots of fields. The objective of this examine is to observe the correlation among the abilties of commercial enterprise intelligence and the effects of a company. Additionally, it seeks to analyse how aggressive intelligence influences this connection. Using a quantitative research technique, information changed into accrued from small and medium-sized corporations (SMEs) in Jordan. The sample consisted of 319 participants, which include both owners and managers. The PLS-SEM method became hired for important analytical operations. The outcomes indicated that all predicted associations had a sizable impact, indicating that aggressive intelligence has a strong influence on the relationship between commercial enterprise intelligence competencies and commercial enterprise effects. Furthermore, the findings emphasised the significant have an effect on of aggressive intelligence on this affiliation. This studies no longer handiest supports current information within the literature but additionally fills expertise gaps within the region by using introducing a brand new conceptual framework that includes additional factors to enhance our comprehension of the challenge count.

Huang et al. (2022) The objective of Business Intelligence is to systematically examine, consolidate, and analytically gather data from diverse sources such as customer information, market trends, competition analysis, and other relevant factors. This is done to improve the overall performance of organisations, with a special focus on startups. The objective of this research is to examine the influence of Business Intelligence on the financial success of start-ups. The approach used is a descriptive survey, which serves a practical purpose. The study focused on a statistical population consisting of CEOs and specialists from startup firms. A total of 250 individuals were included in the sample. In addition, a 43-item questionnaire was used to establish validity by confirmatory factor analysis, and validity analysis was conducted to gather data. The findings showed that Business Intelligence had no effect on Network Learning in startups. However, Business Intelligence increased Innovativeness in startups by 0.99. Additionally, Innovativeness improved the financial performance of startups by 0.311. Startups' intelligence on Network Learning increased by 0.537, and Network Learning had a positive impact on enhancing Innovativeness in startups by 0.632. Furthermore, Network Learning contributed to the enhancement of financial performance in startups by 0.397. The study has proven the influence of Business Intelligence on both Innovativeness and Network Learning. Additionally, it has also confirmed the impact of Innovativeness and Network Learning on financial performance. Therefore, it can be inferred that the influence of Business Intelligence on financial performance has been examined indirectly by considering the mediating effects of Innovativeness and Network Learning in startup companies. Remarkably, these two criteria are crucial for improving financial success.

Talaoui et al. (2021) this research seeks to establish a comprehensive framework that combines the connections between the business intelligence (BI) process and its organisational environment. The analysis of 120 articles published in highly regarded ABS ranked journals spanning a period of 35 years reveals significant trends and inconsistencies across eight dimensions: environmental factors that precede events, factors within organisations that precede events, factors related to managers and individuals that precede events, the process of business intelligence, strategic results, outcomes related to firm performance, decision-making, and organisational intelligence. The paper also highlights deficiencies in the connections between the BI process, its causes, and its results, which should be explored by future studies. The study has practical consequences for professionals, namely regarding the role they should have in actively pursuing useful information as a result of the business intelligence process. Managers often resist having their intelligence practices scrutinised, yet their active involvement in inquisitive and explanatory studies might contribute to business intelligence research and promote a more transparent intelligence culture. The dedication to inclusive involvement and long-term investigations will facilitate the creation of novel research that effectively incorporates the business intelligence process inside its specific environment and promotes innovative metrics for assessing intelligence effectiveness.

Kumar (2020) This study presents a comprehensive comparison of business intelligence with and without data mining. Firstly, this text introduces the concept of business intelligence (BI) both with and without data mining (DM). Business intelligence without data mining refers to a typical decision support system. Business intelligence with data mining refers to a decision system that is constructed by using the principles of data warehousing, online analytic processing, and data mining. Furthermore, a thorough comparison is conducted between Business Intelligence (BI) without Data Mining (DM) and BI with DM. This

comparison is based on the data collected from 10 performance metrics. The comparison is conducted using a paired sample t-test. The average of all performance indicators with data mining is greater than that without data mining. The average discrepancy is unidirectional. Therefore, the analysis of several performance indicators shows that the average of all performance indicators experiences a substantial boost following the deployment of business intelligence with data mining.

INFORMATION SYSTEMS FOR BUSINESSES

When it comes to corporate information engineering, innovative information technologies developed with businesses in mind are what you need. Performance Management systems may be tailored to meet the unique needs of organisations by integrating business intelligence (BI) components with management strategies, tactics, and support resources. Here are the main functions of these systems:

The current performance state of the organisation may be determined by methodically collecting and retaining numerous business measurements at regular intervals.

To gather and save criteria for success (threshold values) and operational guidelines (definitions of what constitutes an acceptable level of performance in relation to target metrics).

- Indicators based on hierarchical aggregation criteria may be consolidated and analysed in depth using structured performance measurements.
- To keep an eye on analysis so that decision makers can quickly see how different company processes are doing and where they need to focus their efforts.

In order to aid in decision-making, especially at the strategic level, business users build and oversee a Business Performance Information System. Multiple indicators, including quantitative and qualitative metrics, lagging and leading indicators, and so on, are used by this approach. In order to maintain a balanced approach, these indicators are compared to specific goals and/or industry standards. With performance review timelines becoming shorter, it's more important than ever for management to be able to proactively influence the result. That calls for tracking and monitoring capabilities that can provide complete, accurate, and up-to-date data that can be used for quick response. An organization's IT infrastructure should be planned in a way that allows for proactive management of business performance.

MANAGING BUSINESS PERFORMANCE AND BUSINESS INTELLIGENCE

Business performance management (BPM) is the last element of business intelligence, representing the next stage in the development of decision support systems, corporate information systems, and business intelligence. If company Process Management (BPM) is derived from Business Intelligence (BI) and encompasses a significant portion of its technology, applications, and processes, then why is BI alone unable to provide the necessary understanding to enhance overall company performance? From a theoretical perspective, it is possible. From a pragmatic perspective, it has not (table 1). Similar to decision support, Business Process Management (BPM) encompasses more than just a technological aspect. firm monitoring and management encompass the procedures, approaches, performance indicators, and technologies employed to oversee and evaluate a firm. After choosing the business process that needs

improvement and determining the business technique to be adopted, it is necessary to set the metrics for monitoring, measuring, and making changes. The business, rather than the IT department, defines and selects these measures, often known as key performance indicators (KPIs). The last stage involves selecting the technology for measuring business performance. company intelligence may be defined as the process of quantifying and analysing company data, specifically focusing on measuring business outcomes rather than managing business performance.

BPM is not a singular technology, but rather a fusion of components - business intelligence, scorecarding, and profiling. Business Intelligence (BI) examines and evaluates historical data and events up to the present day. This is valuable because effective planning necessitates understanding and the ability to establish objectives based on prior experiences. Scorecarding allows you to assess your performance in relation to the goals you have set. Every organisation implements mechanisms that provide feedback to the overarching plan. The latest development in BPM involves the incorporation of various processes, techniques, metrics, and technologies. This is part of an enterprise-wide strategy that aims to prevent organisations from prioritising local business optimisation above overall corporate success.

Table 1: Differences between traditional BI and BI for BPM

Factor	Traditional BI	BI for BPM
Scale	Departmental	Enterprise-wide
Focus	Historical	Timely
Decisions	Strategic and tactical	Strategic, tactical and operational
Users	Analysts	Everyone
Orientation	Reactive	Proactive
Process	Open-ended	Closed-loop
Measures	Metrics	Key performance indicators
Views	Generic	Personalized
Visuals	Tables / charts	Dashboards / scorecards
Collaboration	Informal	Built-in
Interaction	Pull (ad hoc queries)	Push (alerts)
Analysis	Trends	Exceptions
Data	Numeric only	Numeric, text, etc.

The primary objective of any business intelligence (BI) installation is to transform existing data into actionable information and effectively distribute it to key decision makers. BPM primarily concerns itself with a certain portion of the data provided by a BI system. This portion of data pertains to the performance of a business and serves as an indicator of its success or failure. By analysing this information, organisations may concentrate on improving their business performance. BPM encompasses a series of interconnected processes that establish a feedback loop between strategy and execution, enabling a timely response to the given job. Peak performance is attained through:

- Establishing goals and objectives - develop a strategic plan.
- Developing strategies and implementing action plans to accomplish these objectives – plan.
- Tracking the current performance with relation to the set goals and objectives – monitor.

- Implementing remedial measures - take action and make necessary adjustments.

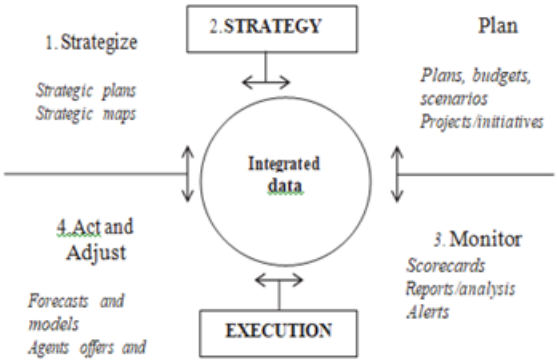

Figure 1: BPM processes

Integrating performance metrics with the entire company plan is a crucial part of obtaining effective company Process Management (BPM). To achieve this goal, it is necessary to integrate performance measurements with strategic management systems, two separate yet complementary areas of technological capability. Goal, initiative, resource, risk, and incentive management systems make up the first group; these systems govern the core business activities that affect the strategy's implementation. Second, it's mainly a BI platform for AI-powered data analysis, reporting, and interchange.

Three primary deliverables need to be produced by the BPM process:

- To help managers better understand the company, we provide them with the necessary information.
- To help them manage the company well, performance supervision is given.
- Making the firm better by making performance more effective.

An all-encompassing strategy, business performance management seeks to discourage companies from putting regional optimisation ahead of global success.

COMBINING BI WITH PERFORMANCE MANAGEMENT

At the present time, many companies use a mix of pre-packaged solutions and custom-built BI tools. Some examples of these tools include enterprise analytics for tactical analysis, strategic performance management systems that expand upon front office operations, and operational reporting and analytics that help with operational decision-making. Different apps, users, and data sources make these three decision levels separate, and that's where the problem lies. The most important thing, however, is that they work in tandem. Independent budgeting, planning, and scorecard systems that use scorecard databases with just compressed data are essential to strategic planning. There is a lack of data that would allow executives to investigate the issue with a key performance indicator thoroughly and identify its source. Analytic programmes, reporting, and online analytical processing (OLAP) technologies are the backbone of tactical analysis, which employs data marts and data warehouses to store both aggregated and detailed information. Complete datasets are the backbone of operational reports, which in turn facilitate operational decision-

making. Integrating strategic and near-real-time operational data is the key to successfully operating a company. To do this, one must utilise business intelligence tools and analytical software to measure performance at the tactical and operational levels, as well as objectives-driven business management at the strategic level utilising dashboards and scorecards (see figure 2).

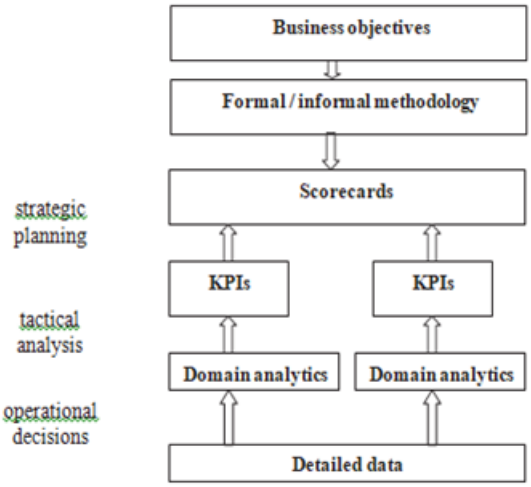

Figure 2: BI integration

The goals of the company at the strategic, tactical, and operational levels should all be in sync with the business intelligence efforts. In order to manage corporate performance effectively, a complete BI framework should combine BPM, enterprise analytics, and operational BI.

BUSINESS PROCESS MANAGEMENT FRAMEWORK

All three levels of company goals strategic, tactical, and operational must be met by business intelligence projects. In addition, a complete BI system should integrate business process management (BPM), enterprise analytics (EA), and operational business intelligence (BI) for effective management of corporate performance.

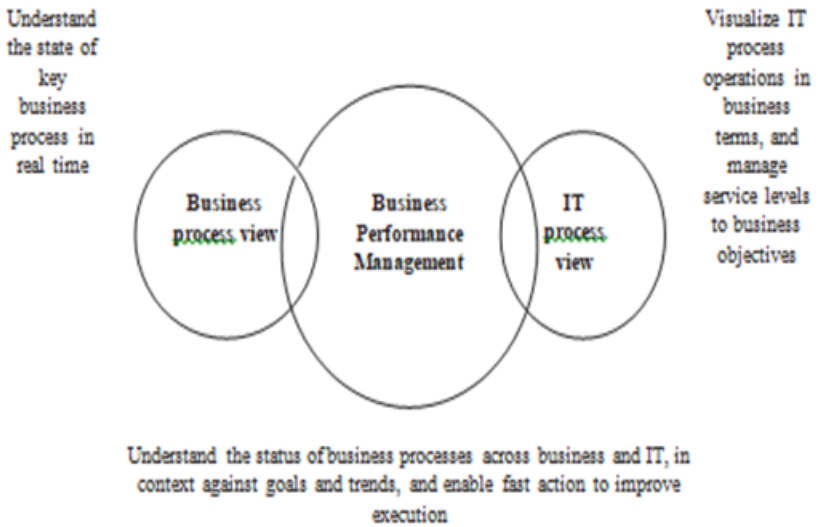

Figure 3: BPM framework

Achieving agility and flexibility in a organization requires consistent technique tracking and the backing of the ideal business intelligence (BI) surroundings. A placing that offers near-real-time access to contemporary statistics to fulfil the demands of operational and strategic choice making. In order to meet those demands, the panorama of commercial enterprise intelligence (BI) is constantly evolving to consist of new technology and answers. Some examples of new models consist of those: Creating a holistic view of the company by combining data on business processes with data on operational activities.

- Streamlining the administration of company operations via the use of standard operating procedures and key performance indicators.
- The creation of preemptive warning systems to forestall issues rather than just mitigate their aftermath; this would allow for more efficient use of resources.
- A real-time data flow enables proactive control and constant monitoring of company activities.

Instead of reacting and adjusting to business troubles as they stand up, agencies can take rate of their operations with the assist of an encompassing BI platform that has these features.

Helping corporations improve and streamline their operations in each vicinity is what Business Process Management (BPM) is all approximately. The selection of new era is simply one a part of the method involved in adopting Business Process Management (BPM). In order to decide whether modern enterprise methods want to be changed, it is important to continuously examine the enterprise environment. A thorough familiarity with one's personal employer's approaches and the sports assisting every side of operations is crucial for a organisation to be successful with Business Process Management (BPM).

CONCLUSIONS

Efficiently overseeing and improving enterprise performance is crucial now not just for maximising profits but additionally for guaranteeing sustainability within the contemporary dynamic and competitive enterprise panorama. Efficient business performance management (BPM) necessitates a easy integration of business information (BI) with planning, budgeting, and actual-time monitoring, offering a full angle of overall performance. The incorporation of business and IT method control with enterprise intelligence (BI) is the essential preliminary stage in achieving efficient enterprise system control (BPM). Organisations may additionally gain integration of different components along with business intelligence, procedure management, business service management, interest monitoring, and company performance management by adopting a comprehensive method. This incorporated approach ensures a unique and comprehensive attitude of the employer, facilitating properly-knowledgeable selection-making and approach congruence. By imposing this full-size integration, Business Process Management (BPM) enables organisations to always oversee, examine, and decorate their performance, making sure their capacity to stay aggressive and adaptable in a unexpectedly evolving marketplace surroundings.

References

1. Ahmad, M., & Afzal, M. T. (2021). The impact of business intelligence on organizational performance: A case study of the telecommunication sector. International Journal of Business Intelligence and Data Mining, 17(2), 110-126.
2. Almajali, D. A., Masa'deh, R. E., & Tarhini, A. (2021). Antecedents of ERP systems implementation success: A study on the influence of organizational culture and business intelligence capabilities. International Journal of Information Management, 57, 102285.
3. Alsharari, N. M., & Youssef, M. A. (2020). Enterprise resource planning (ERP) and business intelligence (BI) systems for decision-making purposes: A theoretical perspective. Journal of Business & Management, 26(1), 77-92.
4. Amarasinghe, A., & Shukla, R. (2020). Enhancing business performance management with big data analytics and business intelligence. Journal of Big Data, 7(1), 52.
5. Bernroider, E. W., & Schmöllerl, P. (2020). The contribution of business intelligence systems to strategic performance management. Information Systems Management, 37(3), 228-242.
6. Bhatt, G. D., & Grover, V. (2021). Types of information technology capabilities and their role in competitive advantage: An empirical study. Journal of Management Information Systems, 38(1), 33-56.
7. Chae, B., Olson, D. L., & Sheu, C. (2021). The impact of advanced analytics and enterprise systems on organizational agility. Journal of Business Analytics, 4(2), 95-112.
8. Chatterjee, S., & Kar, A. K. (2020). A review on the role of big data and business analytics in decision making. Journal of Decision Systems, 29(1), 38-56.
9. Chiang, R. H., Goes, P., & Stohr, E. A. (2020). Business intelligence and analytics education, and program development: A unique opportunity for the information systems discipline. ACM Transactions on Management Information Systems, 11(4), 25.
10. Daradkeh, M. K. (2021). The impact of business intelligence systems on organizational performance: The mediating role of decision-making effectiveness. Journal of Business Research, 128, 365-376.
11. Delen, D., Zolbanin, H. M., & Zadeh, A. H. (2021). The impact of business analytics on supply chain performance. Decision Support Systems, 144, 113490.
12. Deng, X., Doll, W. J., & Cao, M. (2020). Business intelligence success: An empirical evaluation of the role of BI capabilities and decision environments. Information & Management, 57(3), 103136.
13. Elbashir, M. Z., Collier, P. A., & Sutton, S. G. (2021). Business intelligence and analytics in management control systems: The impact on managerial performance. Journal of Management Control, 32(2), 149-174.
14. Farrokhi, V., & Pokoradi, L. (2020). Performance evaluation framework for business intelligence in ERP systems. Journal of Business Economics and Management, 21(3), 715-733.

15. Gandomi, A., & Haider, M. (2021). Beyond the hype: Big data concepts, methods, and analytics. International Journal of Information Management, 55, 102206.

16. Grover, V., Chiang, R. H., Liang, T. P., & Zhang, D. (2020). Creating strategic business value from big data analytics: A research framework. Journal of Management Information Systems, 37(2), 654-685.

17. Gunasekaran, A., Subramanian, N., & Papadopoulos, T. (2020). Information technology for competitive advantage within logistics and supply chains: A review. Transportation Research Part E: Logistics and Transportation Review, 139, 101920.

18. Karami, A., Karami, B., & Mirsaleh, A. (2021). The role of business intelligence in organizational agility: A case study in a manufacturing company. Journal of Business & Industrial Marketing, 36(5), 779-793.

19. Kim, G., Shin, B., & Kwon, O. (2020). Investigating the value of business intelligence and analytics: The role of absorptive capacity. Information & Management, 57(3), 103167.

20. Lavalle, S., Lesser, E., Shockley, R., Hopkins, M. S., & Kruschwitz, N. (2020). Big data, analytics and the path from insights to value. MIT Sloan Management Review, 52(2), 21-32.

21. Lönnqvist, A., & Pirttimäki, V. (2021). The measurement of business intelligence. Information Systems Management, 38(4), 309-324.

22. Maroufkhani, P., Ismail, W. K. W., & Ghapanchi, A. H. (2020). Big data analytics adoption model for small and medium enterprises. Journal of Science and Technology Policy Management, 11(3), 369-392.

23. Nguyen, T. H., & Nguyen, T. N. (2021). The impact of business intelligence on organizational performance: An empirical study in Vietnam. Journal of Science and Technology Policy Management, 12(2), 172-191.

24. Sharma, R., & Mithas, S. (2020). Transforming decision-making processes: A research agenda for understanding the impact of business analytics on organizations. European Journal of Information Systems, 29(1), 26-44.

25. Troisi, O., Maione, G., Grimaldi, M., & Loia, F. (2020). Growth hacking: Insights on data-driven decision-making from three firms. Industrial Marketing Management, 90, 538-557.