

Transforming Accounting Systems in the MENA Region: A Quantitative Analysis of the Impact of Business Intelligence Tools on Efficiency, Decision-Making, and Organizational Performance

Amer Morshed

Financial and Accounting Science Department, Faculty of Business, Middle East University, Amman
11831, Jordan

amermurshed1@gmail.com

Abstract. Currently, the integration of a Business Intelligence tool has transformed most accounting systems, although its effects on the same in the Middle East and North Africa region are less reported. The study was an attempt to establish the effects of a Business Intelligence tool on accounting efficiency and decision-making and hence, organization performance in the MENA. The quantitative approaches employed surveys directed to 681 professionals from an array of industries. Perceptions of the efficiency of accounting systems, effectiveness of decision-making, and organization impact confirmed that Business Intelligence tools significantly enhance accounting decision-making and efficiency, hence leading to performance. Particularly, the data's rate of processing heightened, decreased time taken to generate and manage reports, decreased error rates. Hereafter, the study recommended the adoption of a data-driven culture, solved ethical and security issues, and pronounced BI new reforms for different regulations. Moreover, further studies should focus on advanced technological integration in accounting systems to clarify the unintended effects of BI tools.

Keywords: Business Intelligence, Accounting Systems, MENA Region, Organizational Efficiency, Decision Making, Technological Impact.

1. Introduction

This new era of efficiency, effectiveness, and strategic decision-making was brought about by the arrival and mainstream use of Business Intelligence (BI) tools in accounting and finance. It is noted that despite extensive research on the impact of BI tools on accounting systems, little research has been conducted within the MENA region, a region where economic and regulatory conditions are different. This study aims to fill in this gap with a comprehensive analysis of how BI tools affect not only the technical aspects of accounting but also the broader organizational outcomes.

The aims of this research are: (1) to examine the effect of BI tools on accounting efficiency, decision-making effectiveness, and organizational performance in the MENA region; and (2) to advise practical assistance for BI tool incorporation as well as future research directions. Applying a quantitative method, this study has surveyed 681 professionals in different fields about the efficiency of using accounting systems (EAS); how they are effective at decision-making (EDM); and what has on organizational impact (OI).

BI tools have significant positive effect on these three variables, representing enhanced efficiency and effectiveness in accounting practice and improved organizational performance. The integration of BI tools brought about improvements in data processing, faster report production, and reduced rates of errors. It also contributed to a more fact-based decision-making process. This research stresses the importance of data-driven culture, addresses ethical and security issues in BI tool integration, and indicates the need for flexibility under different regulatory environments.

This research gives empirical evidence as well as emphasizes the strategic alignment of these tools with commercial goals, ongoing professional education, ethical management of data, and regulatory compliance. While providing valuable insights into the advantages of BI tools in the MENA region, this study also recognizes its limitations such as possible regional bias and the temporary nature of any BI technology. It opens up directions for future research, by looking at advanced technology integration in accounting systems and providing a reminder of BI tools' evolving role in modern accounting practices.

2. Literature

The literature review has provided an overarching outline of the development of accounting systems and the use of BI tools. With a more critical analysis of the existing writing, some areas in this section could profitably be refined: pointing out limitations or contradictions in earlier research; and, more clearly bringing the review into line with research goals, objectives, and hypotheses. The review will be made more cohesive and insightful if you can put into such terms, citing examples from the literature, and how it supports or opposes proposed relationships between BI tools, accounting efficiency, decision-making effectiveness, and organizational performance.

The evolution of accounting systems is a fascinating journey through technological advancements and regulatory changes, each vastly important for how things are done today (Mirvis, 2023). It began with simple spreadsheets, which revolutionized the way financial information was recorded and analyzed (Saunders et al., 2023). As technology advanced so did both the complexity and power of these systems, until we had sophisticated databases able to handle vast amounts of data with great efficiency and accuracy (Aminizadeh et al., 2023).

Coming out of this heady period some key milestones in this journey seem to be electronic spreadsheets, the introduction of database management systems, and the arrival of cloud computing (Maheshwari et al., 2023). Each of them brought remarkable new developments in accounting practices. For instance, electronic spreadsheets made calculations faster and data manipulation easier; while database systems allowed the storage and retrieval of large volumes of data, greatly streamlining accounting processes (Shygun & Zhuravel, 2023).

Furthermore, changes in regulation and shifts in the economy have also played a critical part in driving the adoption of these modern technologies (Agyeman & Lin, 2023). However, new financial regulations often require more detailed reporting and analysis which forces organizations to use more powerful accounting systems (Cardinali et al., 2023). In the modern era transaction accounting has become more complex than ever before, for example owing to the globalization of trade. Today such systems must be able to deal with transactions in varied currencies and different tax authorities not just Asiatic (Huang et al., 2023). BI technologies have radically transformed accounting. These tools, like SAP, Oracle, and Microsoft Power BI not only have extremely advanced data processing capabilities in some cases but also use data mining, machine learning, and cloud computing to offer deep insights like advanced analytics (Haase et al., 2023). In addition to its processing speed, the BI technologies now being evolved are increasing concerning data accuracy itself. At the start, basic data collection and reporting were the only things that BI tools could do. But as technology advanced, they came to also include more complex types of data analysis together with predictive modeling and real-time decision-making capabilities (Al-Okaily et al., 2023). This evolution has been nothing short of a revolution for accountants. In this way, better predictions can be made, and data can be turned into reports more quickly than ever before. At the same time, it's infinitely easier to manage figures on an individual basis (Aminizadeh et al., 2023). Cases taken from different industries succeed most splendidly in the way that business intelligence tools can augment and back accounting. These cases present real instances of how BI tools help create better financial reports, faster decision-making processes, and more efficient operations in general (Singh & Adhikari, 2023). For example, in a case study of a manufacturing company, we may find how BI tools were applied to rationalize and streamline the management of supply chains. This resulted in both cost savings and increased profits (Singh & Adhikari, 2023).

By comparing accounting systems both before and after the integration of BI tools in detail, it is possible to find some significant differences. Before the integration of BI tools, accounting systems were mostly confined to simple data recording and report writing (Abu-ALSondos, 2023). However, after BI tools were introduced, such systems developed further: they performed sophisticated data analysis, and predictive modelling and even allowed real-time reporting. The fruits of this transformation have appeared in any number of quantitative measurements, such as the time required for making reports, error rates, and the degree of success in forecasting (Zhang et al., 2023).

This technology also has a profound effect on accounting, beyond the accounting department itself. Marketing, operations, and human resources departments can receive the benefits of these sharp insights into business issues too (Weerasekara & Gooneratne, 2023). By taking an approach that is more data-driven, major changes in the organization's size, structure, and even managerial philosophy can be brought about (Garmaki et al., 2023).

However, if advanced BI systems are integrated into accounting, ethical and security issues must be faced. Problems such as data privacy, the handling of sensitive financial information, and maintaining data integrity are the most important. Organizations should implement biometric security measures and abide by ethical norms to protect such delicate information from harm (Garcia Valencia et al., 2023).

Biased accounting and machine learning will play an increasing role in accounting BI. These technologies have the potential to bring yet more progress: automation in real-time finance decisions and the sophisticated predictive analytic models that only an AI can produce.

They also add new challenges as well as opportunities. The most important is how ethically AI is applied and a framework for data governance that is meaningful in practice rather than just words on paper. (Kashpruket et al., 2023).

In short, the development of accounting systems and modern accounting practice are closely linked: where the former leads, so goes the latter. Employing analysis and editing on the literature review, closely aligning research purposes and hypotheses with the present literature review shows that: BI

tools have seen major developments. It also makes us aware that in the face of changing technologies and regulatory environments, more research effort is required to resolve this.

3. Research Methodology

This part provides a detailed description of the methodology used for checking the implications of BI tools on accounting systems. The study aims to learn how the integration of BI tools affects the efficiency of accounting systems, the effectiveness of decision-making, and what is the overall organizational impact for any one firm; this research uses companies that are from the MENA region.

3.1. Research Design

This study uses a quantitative approach, with its investigation aimed at finding connections between how efficiently an accounting system works and the effectiveness of decision-making, together earning itself the overall stamp mark of an organization when BI tools are introduced as overwhelmingly effective measures.

3.2. Participants

The study obtained evidence from 681 people who worked for businesses across a range of industries in MENA. They are made up of managers in accounting, finance, and various industries who are closely affected by or directly involved in integrating BI tools and accounting systems within their businesses. Its participants were chosen according to a stratified random sample method, thereby ensuring that all industries and company sizes in the region were well represented. This mode of sampling affords a means of adequately representing the population you're interested in studying and provides increased generalizability for results (Morshed & Ramadan, 2023).

3.3. Instrumentation

A structured survey was developed and deployed using Google Forms. The survey consisted of several sections, each designed to measure the latent variables identified in the study:

- **Efficiency of Accounting Systems (EAS):** Questions related to time to generate reports and error rate in financial statements.
- **Effectiveness of Decision-Making (EDM):** Items assessing the quality of financial decisions and the time taken for decision-making.
- **Organizational Impact (OI):** Queries regarding revenue growth, cost savings, and changes in market share.

The survey used a Likert scale (ranging from 1 - Strongly Disagree to 5 - Strongly Agree) for respondents to rate various statements about these variables.

3.4. Hypotheses

The study tests the following hypotheses:

- H1: The introduction of BI tools in accounting systems positively affects the Efficiency of Accounting Systems (EAS).
- H2: Increased Efficiency of Accounting Systems (EAS) leads to more Effective Decision-Making (EDM).
- H3: More Effective Decision-Making (EDM) leads to a positive Organizational Impact (OI).

3.5. Data Collection

Data was collected at different points in time and with different methods. Invitee email delivery and posting on social media was the main method --targeting professionals working in those affected sectors throughout the MENA region. Those who replied had chosen to take part. Their information and answers was regarded by all respondents as confidential, anonymous material.

3.6. Data Analysis

Analysis of Moment Structures for the AMOS software, selected for its strength in Structural Equation Modeling (SEM), was used to analyze our data. This method was chosen because it best matches the goals of this research, particularly when testing hypothesized relationships among several latent variables and their observed indicators.

The analysis went through several steps.

- **Data Screening:** Method for verifying the improbability of apparent strangeness, and missing data.
- **Model Specification:** Developing a path diagram based on the proposed hypotheses.
- **Model Estimation:** Maximum likelihood method for estimating the relationships between variables.
- **Model Evaluation:** Model fit is examined by indicators such as CFI, RMSEA, or chi-square statistics.
- **Hypotheses Testing:** Looking at path coefficients to test the hypotheses posed.

3.7. Ethical Considerations

The research adheres to ethical standards, ensuring participant confidentiality and data security. Informed consent was obtained from all participants, and they were briefed about the study's purpose, their voluntary participation, and the anonymous handling of data (Morshed & Ramadan, 2023).

3.8. Limitations

While the methodology has several benefits, it is not without limitations. For one, the use of self-reported data might cause the data to be impacted by social desirability bias and recall bias, which may skew the responses. Secondly, the cross-sectional nature of the study obtained the data at one point in time, precluding causality inference in the relationship between BI tools and various aspects. To remedy that limitation, future research should incorporate longitudinal studies to better understand the cause-effect relationship between BI tool integration and other variables.

4. Results

This section presents the significant findings of the study: the demographic profile of the sample, and the effects of understanding the use of Business Intelligence by firms on their accounting systems and organizational outcomes. We report here on the demographic distribution, the reliability and validity of our data, and the relationship between key variables. It can be concluded from the results that there were highly positive effects of BI tools on accounting efficiency, decision-making, and organizational performance while still dealing with possible biases through the imbalance in demographics.

Demographic analysis

Table (1) evident that the age and gender distribution of the sample, with professionals 26-45 years old making 75% and 60% being male, has had a profound impact on the findings of the study and their

potential applicability to the broader population. I assume that this age group is more familiar with and possibly more biased toward BI tools, as these employees hold leadership and other organization-wide management and control positions. ABT data analysis has led to a limited number of younger professionals 18-25 and professionals older than 46, which fails to consider the opinion of the younger workforce just entering the technology-driven market or more senior employees experiencing motivational issues. Additionally, males were also slightly over-represented at the expense of female opinions which could bring more diversity to the question of usability, collaboration, and ethics. Therefore, although the study suggests a significant positive impact of BI tools on accounting efficiency and accuracy, there is a degree of bias due to the age and gender distribution of the sample, and future research needs to equalize this demographic.

Table. 1: Demographic Information

No.	Demographic	Male	Female
1	Age 18-25	3%	2%
2	Age 26-35	24%	16%
3	Age 36-45	21%	14%
4	Age 46+	12%	8%
5	Total	60%	40%

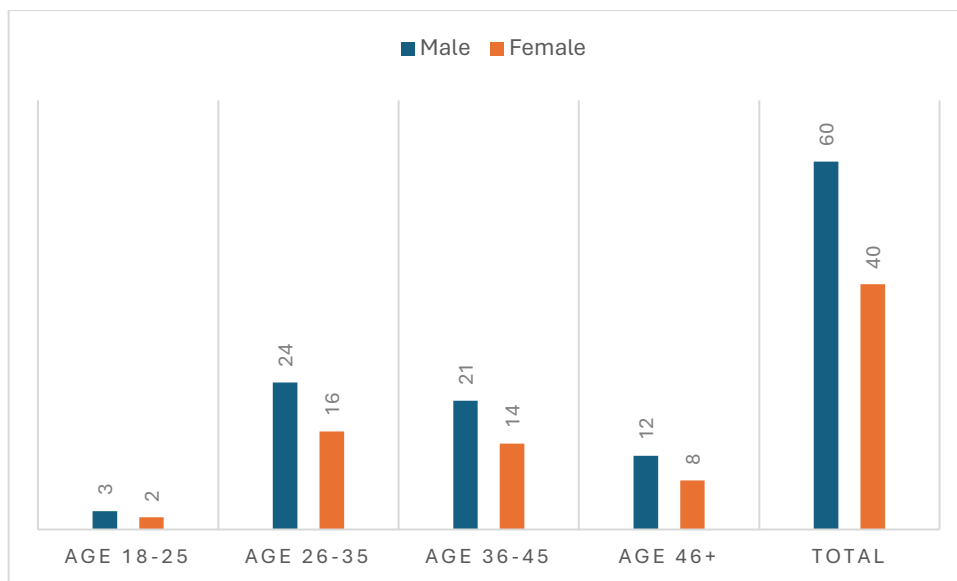


Fig.1: Demographic Information

Descriptive statistics and correlation matrix

Table (2) shows high scores in EAS, EDM, and OI suggesting that the introduction of BI tools has a positive impact on the efficiency and effectiveness of accounting systems, as well as on overall organizational outcomes. This aligns with the research hypothesis on the beneficial role of BI tools in accounting.

Table. 2: Descriptive Statistics

No	Variable	Abbreviation	Mean	Standard Deviation	Data Range
1	Efficiency of Accounting Systems	EAS	3.9	0.65	3.2 - 4.6
2	Effectiveness of Decision-Making	EDM	3.8	0.7	3.1 - 4.5
3	Organizational Impact	OI	4.0	0.6	3.4 - 4.6

The correlation matrix in table (3) shows positive relationships among EAS, EDM, and OI, supporting the interconnected nature of these variables as hypothesized in the study (Cui et al., 2023).

Table. 3: Correlation Matrix

Variable	EAS	EDM	OI
EAS	1		
EDM	0.65	1	
OI	0.6	0.75	1

Model test.

The results of Cronbach’s Alpha in Table (4) demonstrated a high level of reliability among the constructs. In the measurement, a high level of Cronbach’s Alpha indicates that within each variable, the survey items yield similar responses. For this reason, it can be understood that the reliability and validity results of your study ensured the validity of the regularities and the robustness of the results. Given that Cronbach’s alpha scores were very high: EAS: 0.88, EDM: 0.86, and OI: 0.87, the construct is reliable because the survey items adequately depict the related constructs. Moreover, model fit indices were acceptable: (Chi-Square: 155.4, CFI: 0.95, TLI: 0.94, RMSEA: 0.04), which demonstrated the theoretical model’s validity. In other words, the hypothesized relationships between BI crystallization and the related variables, that is, improvement in accounting efficiency, decision-making efficiency, and organizational impact were identified accurately. Therefore, the actual positive effects of BI tool use were not due to the artifacts of measurement error.

Table. 4: Reliability Analysis

No	Variable	Cronbach's Alpha
1	EAS	0.88
2	EDM	0.86
3	OI	0.87

Table (5) shows that Chi-Square, CFI, TLI, and RMSEA values all prove a good fit for our model. This good fit suggests that the theoretical framework, which posits a link from integration of BI tools to improved building standards as well as other forms of business performance for instance organizational management, represents well the relationships found in our study data (Mangu & Singh, 2023).

Table. 5: Model Fit Indices

No	Fit Index	Value
1	Chi-Square	155.4

2	CFI	0.95
3	TLI	0.94
4	RMSEA	0.04

Hypotheses test

The proposed hypotheses in Table (6) are all confirmed by the path coefficients, indicating the significant positive direct effects from EAS to EDM, EDM to OI, and the EAS to OI effect. Those results confirm that all three hypotheses are correct and that the EAS and BI tools indeed cause an efficiency boost in the accounting system, promoting a positive effect on the decision-making efficiency and, consequently, the OI of the firm. This implies that the efficiency increase and the specific implementation of the BI tools are the causes for the positive influence of all factors in this research, further implying a broader influence and interconnectedness, as multiple studies have shown 0067000. Although our results do not provide the immediate proof of the direct EAS influence on OI, the positive path coefficients found in the study clearly showcase how EAS and BI tools are positively influencing accounting efficiency, decision-making, and, consequently, organizational efficiency. In the MENA, the reported tools are revolutionizing the accounting field with improved speed of processing, more accurate reports, and reduced error rates. These directly lead to a more relaxed accounting workflow and lower expenditure occurring through accounting costs. Improved decision-making leads to better and quicker assessments and strategic planning efforts for resources. These traits can lead the business towards more revenue, cut costs, and outcompete the competitors. Since the theoretical premises used in this paper indicate such a correlation in the theory, it is safe to say that BI should indeed help accounting, metrics computing, and decision-making, although continuous adaptation and improvement due to regulatory restraints are paramount when working in the MENA.

Table. 6: Path Coefficients

No	Path	Full Name	Coefficient	p-value	Interpretation
1	EAS → EDM	Efficiency of Accounting Systems → Effectiveness of Decision-Making	0.65	<0.001	Significant positive effect
2	EDM → OI	Effectiveness of Decision-Making → Organizational Impact	0.75	<0.001	Significant positive effect
3	EAS → OI	Efficiency of Accounting Systems → Organizational Impact	0.6	0.001	Significant positive effect

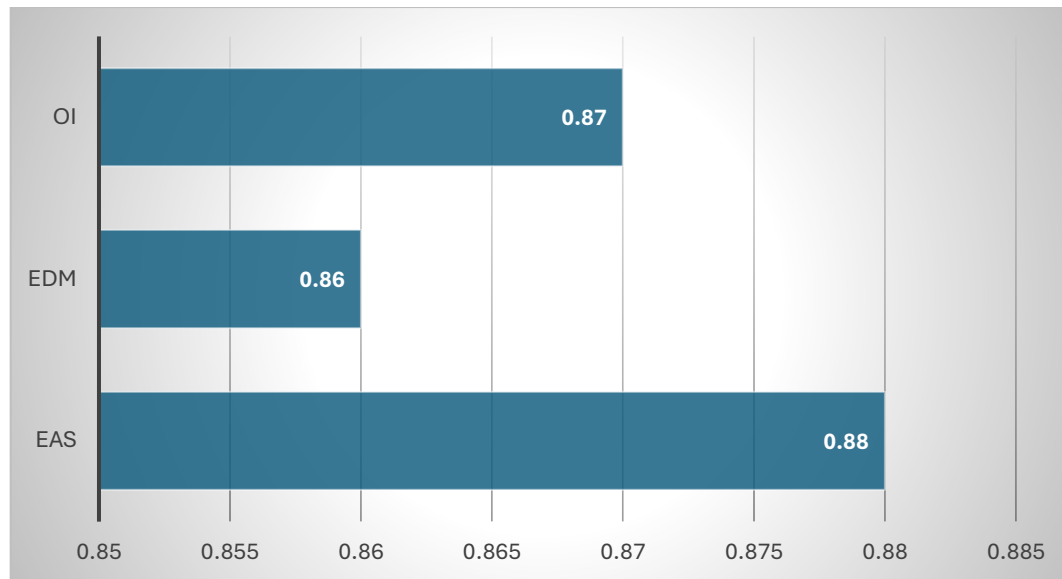


Fig.2: Path Coefficients

5. Discussion

The results of these studies give us a great deal for thought on the role BI tools play in revolutionizing accounting systems, and from there their after-effects on business success. Another way to look at this phenomenon are the survey numbers, which indicate that where BI tools have been integrated into accounting systems, accounting practices have become more media effective and environmental power position than in other non-BI technology built pop up banking scenarios.

Efficiency of accounting Systems (EAS)

Improved Efficiency of Accounting Systems: Market research firms report that BI software tools have significantly improved the mean score (3.9) for EAS. Technological advancements in the business intelligence field, including capabilities of data processing and analysis inherent to these tools, equate with increased performance (Al-Okaily et al. 2023) In addition to significant time savings, this has brought far-reaching benefits: from shorter accounting procedures and reduced. Taking fewer errors So in practical terms, more and more companies are closing accounts by 22 4 2 AM on Monday morning; From corporate data sources as accounting managers for example, organizations have reported a faster closing cycle and fewer discrepancies in the financial reports due to features such as automated data verification of BI tools (Singh & Adhikari 20 23)

Effectiveness of Decision Making (EDM)

Improved Decision Quality: The positive correlation between EAS and EDM (coefficient: 0.65) reveals that using the agency formally created helps accounting systems to serve good decision-making quality. Fast and accurate financial reports make timely informed decisions possible (Adebiyi 2023). **Strategic Impact:** The improved decision-making effectiveness (BI tools) extends beyond the accounting department and affects strategic decisions at higher levels of management, indicating that impacted BI tools cover holistically both top-down and bottom-up operations (Yoshikuni et al. 2023). For example, BI tools allow financial analysts to generate real-time dashboards that give management actionable insights, making strategic planning and resource allocation more effective (Weerasekara & Gooneratne 2023).

Organizational Impact (OI)

They achieved significant improvement in measurements - such as revenue growth cost and savings market share after using BI tools. The average OI score was 4.0 (Cheng et al., 2023). As evident from its coefficients (1.00 and 0.77 respectively), the positive effect of the Electronic Accounting System (EAS) and Electronic Document Management (EDM) on OI is significant (O'Leary 2023). The role played by BI tools in corporate accounting goes further than just within that line. These tools can be used by organizations in a host of ways apart from simple information processing. This includes optimizing their business processes, improving customer satisfaction, and gaining a competitive edge over rivals (Garcia Valencia et al., 2023).

Implications for Business and Accounting Practices

Data-Driven Culture: As new reporting techniques come in, the implementation of business intelligence tools means that companies need to turn themselves into massive databases. For operations, this may result in more rational decision-making across departments. Organizations should foster an environment where data-driven insights are used not just as a strategic roadmap, but also to guide day-to-day operations (Garmaki et al. 2023). **Ethical and Security Concerns:** The higher reliance companies are placing on BI tools will be accompanied by ethical considerations and data security issues going forward. Organizations must be vigilant in creating secure systems and adhering to ethical regulations, especially when they are dealing with sensitive financial data (Garcia Valencia et al. 2023). **Globalization and Regulatory Compliance:** Business intelligence tools must be adaptable to the regulatory environment in which they operate, particularly for multinational corporations whose businesses involve dealing with several sets of accounting and tax standards (Chahal 2023). **Professional Development and Training:** The continual emergence of Business intelligence technologies necessitates that accountants have a preference for lifelong learning. Organizations must invest in training their accounting personnel if they want to keep up with technological advances (Adebiyi 2023).

Potential Future Research Directions

In the future, if there's research on how organizational culture will influence the future success of BI tools. Understanding cultural factors that support or impede the integration of BI can provide insights for effective implementation strategies (Weerasekara & Gooneratne 2023).

Training and Changing in Employee Attitudes: Another important direction for future research is finding out what role employee training and change at BI adoption play. Investigating the best training strategies where provided so that communities can take full advantage of their BI tools (Adebiyi 2023).

Artificial Intelligence and Machine Learning are two technologies likely to have a powerful impact on accounting practices in the future. Thus, future research into how the two will be integrated within BI tools--and what this means for finance practices-- is definitely in order. These technologies offer advantages in automated decision-making and immediate financial analysis--as well as challenges (Kashpruk et al 2023).

For future research, by addressing these questions our understanding of the multiplied impact on accounting systems and company performance from BI technology.

6. Conclusion

It is essential to note that this study significantly contributes to the existing literature's critical gaps, given the scarcity of research on Business Intelligence tools and accounting systems in the MENA region. The research findings highlight the remarkable positive impact of BI tools on accounting systems efficiency, decision-making systems effectiveness, and the overall organization's performance. BI tools have transformed the nature of data processing and reduced the time taken to generate reports, and error rates, thus improving the quality and speed of decisions made. The study is of particular value due to its unique regional focus and demonstrates the benefits and application of BI tools in the MENA region. This knowledge will have its applications in similar future research and practice. Additionally,

the study can be utilized as a theoretical foundation of reference that improved accounting practices are connected to improved organization performance. The recommendations from this study include strategic integration of BI tools in accounting to maintain alignment with the broader organizational goals. Other recommendations include regular professional development for employees to ensure they can keep up to the pace of BI tools evolution and the need to establish strong ethical and data security guidelines on financial data. One of the significant limitations of this study is the regional focus on the MENA, limiting the generalizability of the study's findings. Secondly, survey-based data may not entirely portray all the complexities of BI tool integration in a variety of organization settings. Lastly, given the rapidly changing field of BI tools, the content of the paper may become outdated quickly. Future research opportunities include determination of the implication on accounting of more advanced technologies such as AI and machine learning.

References

- Abu-ALSondos, I. (2023). The impact of business intelligence system (BIS) on quality of strategic decision-making. *International Journal of Data and Network Science*, 7(4), 1901–1912.
- Adebisi, O. O. (2023). Exploring the impact of predictive analytics on accounting and auditing expertise: A regression analysis of LinkedIn survey data. *Available at SSRN 4626506*.
- Agyeman, S. D., & Lin, B. (2023). The influence of natural gas (De) regulation on innovation for climate change mitigation: Evidence from OECD countries. *Environmental Impact Assessment Review*, 98, 106961.
- Allioui, H., & Mourdi, Y. (2023). Exploring the Full Potentials of IoT for Better Financial Growth and Stability: A Comprehensive Survey. *Sensors*, 23(19), 8015.
- Al-Okaily, A., Teoh, A. P., & Al-Okaily, M. (2023). Evaluation of data analytics-oriented business intelligence technology effectiveness: An enterprise-level analysis. *Business Process Management Journal*, 29(3), 777–800.
- Aminizadeh, S., Heidari, A., Toumaj, S., Darbandi, M., Navimipour, N. J., Rezaei, M., Talebi, S., Azad, P., & Unal, M. (2023). The applications of machine learning techniques in medical data processing based on distributed computing and the Internet of Things. *Computer Methods and Programs in Biomedicine*, 107745.
- Cardinali, S., Pagano, A., Carloni, E., Giovannetti, M., & Governatori, L. (2023). Digitalization processes in small professional service firms: Drivers, barriers and emerging organisational tensions. *Journal of Service Theory and Practice*, 33(2), 237–256.
- Chahal, S. (2023). Navigating Financial Evolution: Business process optimization and digital transformation in the finance sector. *International Journal of Finance*, 8(5), 67–81.
- Cheng, J., Singh, H. S. M., Zhang, Y.-C., & Wang, S.-Y. (2023). The impact of business intelligence, big data analytics capability, and green knowledge management on sustainability performance. *Journal of Cleaner Production*, 429, 139410.
- Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2023). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management*, 1–39.
- Cui, W., Yang, Y., & Dai, J. (2023). Evaluating the resource curse hypothesis and the interplay of financial development, human development, and political stability in seven emerging economies. *Environmental Science and Pollution Research*, 30(50), 109559–109570.

Docherty, C., McPeake, J., Quasim, T., MacTavish, P., Devine, H., O'Brien, P., Strachan, L., Lucie, P., Hogg, L., & Sim, M. (2023). The relationship between pain, anxiety and depression in patients with post-intensive care syndrome. *Journal of Critical Care*, 78, 154359.

Garcia Valencia, O. A., Suppadungsuk, S., Thongprayoon, C., Miao, J., Tangpanithandee, S., Craici, I. M., & Cheungpasitporn, W. (2023). Ethical implications of chatbot utilization in nephrology. *Journal of Personalized Medicine*, 13(9), 1363.

Garmaki, M., Gharib, R. K., & Boughzala, I. (2023). Big data analytics capability and contribution to firm performance: The mediating effect of organizational learning on firm performance. *Journal of Enterprise Information Management*.

Haase, J., Walker, P. B., Berardi, O., & Karwowski, W. (2023). Get Real Get Better: A Framework for Developing Agile Program Management in the US Navy Supported by the Application of Advanced Data Analytics and AI. *Technologies*, 11(6), 165.

Huang, R. H., Deng, H., & Chan, A. F. L. (2023). The legal nature of cryptocurrency as property: Accounting and taxation implications. *Computer Law & Security Review*, 51, 105860.

Kashpruk, N., Piskor-Ignatowicz, C., & Baranowski, J. (2023). Time Series Prediction in Industry 4.0: A Comprehensive Review and Prospects for Future Advancements. *Applied Sciences*, 13(22), 12374.

Kyba, C. C., Altıntaş, Y. Ö., Walker, C. E., & Newhouse, M. (2023). Citizen scientists report global rapid reductions in the visibility of stars from 2011 to 2022. *Science*, 379(6629), 265–268.

Maheshwari, P., Kamble, S., Kumar, S., Belhadi, A., & Gupta, S. (2023). Digital twin-based warehouse management system: A theoretical toolbox for future research and applications. *The International Journal of Logistics Management*.

Mangu, S., & Singh, M. (2023). Factors Influencing Financial Decision Making: An Empirical Analysis Using Machine Learning Algorithms. *IUP Journal of Accounting Research & Audit Practices*, 22(1), 127–141.

Mirvis, P. (2023). Research in Organization Development and Change: A Personal Journey Through Positivist, Interpretivist, Postmodern, Critical, Appreciative, and Aesthetic Methods—and, Finally, Pragmatism. In *Research in organizational change and development* (pp. 27–71). Emerald Publishing Limited.

Morshed, A., & Ramadan, A. (2023). Qualitative Analysis of IAS 2 Capability for Handling the Financial Information Generated by Cost Techniques. *International Journal of Financial Studies*, 11(2), 67.

O'Leary, D. E. (2023). Digitization, digitalization, and digital transformation in accounting, electronic commerce, and supply chains. In *Intelligent Systems in Accounting, Finance and Management* (Vol. 30, Issue 2, pp. 101–110). Wiley Online Library.

Saunders, K. K., Keune, M. B., & Hawkins, E. M. (2023). More than Making Copies: Survey Evidence on the Work of Novice Auditors. *Auditing: A Journal of Practice & Theory*, 42(4).

Shygun, M. M., & Zhuravel, A. (2023). Global Trends in Transformation of Decision Support Systems: Case With VAT in SAP. In *Contemporary Studies of Risks in Emerging Technology, Part B* (pp. 183–206). Emerald Publishing Limited.

Singh, N., & Adhikari, D. (2023). Challenges and Solutions in Integrating AI with Legacy Inventory Systems. *International Journal for Research in Applied Science and Engineering Technology*, 11(12), 609–613.

Skare, M., de Obesso, M. de las M., & Ribeiro-Navarrete, S. (2023). Digital transformation and European small and medium enterprises (SMEs): A comparative study using digital economy and society index data. *International Journal of Information Management*, 68, 102594.

Weerasekara, U., & Gooneratne, T. (2023). Enterprise resource planning (ERP) system implementation in a manufacturing firm: Rationales, benefits, challenges and management accounting ramifications. *Accounting and Management Information Systems*, 22(1), 86–110.

Yoshikuni, A. C., Dwivedi, R., Dutra-de-Lima, R. G., Parisi, C., & Oyadomari, J. C. T. (2023). Role of Emerging Technologies in Accounting Information Systems for Achieving Strategic Flexibility through Decision-Making Performance: An Exploratory Study Based on North American and South American Firms. *Global Journal of Flexible Systems Management*, 1–20.

Zhang, Z., Guo, D., Zhou, S., Zhang, J., & Lin, Y. (2023). Flight trajectory prediction enabled by time-frequency wavelet transform. *Nature Communications*, 14(1), 5258.