



The Mediating Role of Enterprise Resources Planning on Accounting Information System Quality and the Performance of Smes In Libya

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Citation: Abdulfatah Juma Brrim, et al. (2024), The Mediating Role Of Enterprise Resources Planning On Accounting Information System Quality And The Performance Of Smes In Libya, *Educational Administration: Theory and Practice*, 30(3) 3289-3297

Doi: 10.53555/kuey.v3oi3.9956

ARTICLE INFO

ABSTRACT

The rapid development of the business environment and relying more on information as a resource makes it more dependent each time on the quality and speed of information when decisions are made. Libyan SMEs suffer from a lack of performance that is tied to ineffective information availability. This study aims to identify the impact of the accounting information system on the SME's performance in Libya through the mediation of implementing the enterprise resource planning system. This study is based on the general system theory, which views the system as a collection of elements that interact with a structural and functional component via boundaries, elements, a communications network, and information. This study follows the quantitative method. The questionnaire instrument was used to collect the data. This study relies on a cross-sectional time horizon in collecting the data from 384 SME managers in Libya. The results of this study indicate there is a positive and significant relationship between five dimensions of accounting information systems: tangibility, reliability, responsiveness, assurance, empathy, and SME performance in Libya. There is also a positive and significant relationship between ERP adoption and SME performance in Libya. ERP adoption influences the performance of Libyan SMEs. This study contributes to the body of accounting information system toward the improvement of SMEs performance through the technology transformation of adopting ERP. It is recommended by this study that businesses with effective and efficient accounting information systems will have a high chance of success.

Keywords: tangibility, reliability, responsiveness, assurance, empathy, ERP, performance, SMEs, Libya

INTRODUCTION

Accounting, with its origins tracing back to ancient civilizations, serves a pivotal role in today's complex economic milieu. Since the inception of structured societies, accounting has been instrumental in encapsulating the financial ebb and flow of organizations. Historical narratives, such as those highlighted by Taiwo (2016), indicate the sustained evolution of accounting through eras, tailored to cater to the economic imperatives of each epoch. The primary function of accounting, irrespective of its evolutionary stages, remains to offer reliable and authentic financial insights, catering to both internal stakeholders and external entities (Daw & Peter, 2015).

The global relevance of Small and Medium Enterprises (SMEs) is undeniable. They contribute to 60% of employment in developing nations (World Bank, 2022). Particularly in Africa, SMEs have showcased agility, rapidly adapting to volatile environments. Within Libya, SMEs have been at the forefront of policy discussions, especially concerning the recent economic reforms. According to the Libyan National Economic Survey (2022), SMEs constitute 70% of the Libyan business landscape. However, as highlighted by Shetty & Panda (2022), despite their flexibility, many SMEs in Libya face systemic challenges in adopting innovative practices. Historical data indicates a distinct reliance on traditional

management models, often dependent solely on the vision of the primary shareholder (Jia et al., 2022). This rigidity poses risks in the evolving market dynamics. For instance, a survey by the Libyan Business Consortium (2022) found that only 35% of SMEs in Libya feel adequately prepared to handle modern technological challenges.

The SME, through history, has been characterised by an administration that rests on the vision of its sole shareholder and supplier of own funds: its owner, not yet convinced of the importance of innovation and the need to increase the technological capacity in terms of management modes (Ahn & Jacobs, 2019). It is necessary that the SMEs put into practice that ability to adapt exceptionally to the changes in the environment and challenge old managerial paradigms. These are times of significant changes for Libyan companies (Khalifa, Dabab, & Barham, 2019). Companies will adopt new approaches and new ways to operate to meet the unique demands of the country. On the one hand, the challenge implies modernising and developing competency skills, and on the other, integrating all the aspects that mean strengths, strategy, and business objectives (A. Al-Dmour, Zaidan, & Al Natour, 2021). This cannot be improvised; it requires a planned action that must be based on two fundamental pillars: the link between the university world and the SMEs, to meet the real needs of managerial training; and the systems approach management that takes shape in a new vision in the direction of companies (Abu Afifa & Saleh, 2021). Within these is the accounting information, which constitutes a large part of the companies' information system and, therefore, of the process of taking managers' decisions today. Little is what a finance department can do modern and emerging in a company where executives do not use information widely accountant (Hank C. Alewine & Stone, 2017).

Enterprise Resource Planning (ERP) systems are integral to the efficient functioning of modern businesses, including Small and Medium Enterprises (SMEs). The adoption of ERP systems has been shown to significantly enhance various aspects of organizational performance by integrating and automating key business processes. This study focuses on understanding the impact of ERP adoption on the performance of Libyan SMEs, particularly how ERP systems mediate the relationship between Accounting Information System (AIS) quality and organizational performance. Huang and Huang (2019) illustrate how ERP systems can streamline raw material purchase and payment processes in feed processing enterprises. Their study emphasizes the role of ERP in improving operational efficiency by reducing manual interventions and errors. For Libyan SMEs, adopting ERP systems could similarly enhance operational processes, leading to increased productivity and reduced costs. Nowadays, ERP systems are fundamental for the management of thousands of companies of all sizes and belonging to different sectors. For these companies, ERP is as important as the electricity that powers all systems. In Libya, most of the SMEs yet adopted the ERP system (Esaudi et al., 2022).

This study examines the impact of AIS quality on SME performance in Libya, with a specific focus on the mediating role of ERP adoption. The research is guided by the General Systems Theory (GST), which conceptualizes organizations as interconnected systems where information flows between various components (Lu et al., 2023). The study will evaluate the influence of five key dimensions of AIS quality—tangibility, reliability, responsiveness, assurance, and empathy—on SME performance. These dimensions have been widely recognized in information system research for their role in enhancing user satisfaction, system effectiveness, and overall business outcomes (Pedroso et al., 2020). Furthermore, the study will assess whether ERP adoption strengthens the relationship between AIS quality and SME performance, providing a theoretical and empirical foundation for understanding how SMEs can leverage technology to improve their financial and operational efficiency.

LITERATURE REVIEW

Despite the growing importance of digital tools in modern business operations, many Libyan SMEs remain hesitant to adopt technologies such as Accounting Information Systems (AIS) and Enterprise Resource Planning (ERP) due to low digital literacy, fear of cyber threats, and resistance to change (Libyan Business Association, 2023). Research shows that over 65% of SMEs in Libya still rely on manual bookkeeping and traditional accounting methods, which limits their ability to track expenses, generate real-time financial reports, or optimize cash flow management (Libyan Chamber of Commerce, 2023). Additionally, many SME owners view digital transformation as expensive and complex, particularly in the absence of government incentives or training programs to support technology adoption. Addressing this challenge will require a concerted effort to increase digital awareness, reduce implementation costs, and provide technical training to SME owners and employees.

Enterprise Resource Planning

It refers to the systems and software packages used by organizations to manage day-to-day business activities, such as accounting, procurement, project management and manufacturing (ORACLE, 2017). It refers to the managerial software that used to plan the available resource of the production.

The adoption and successful implementation of an Enterprise Resource Planning (ERP) framework are pivotal to modern organizations that eye long-term operational smoothness and performance optimization. With the

evolving complexity of the business environment, there has been a mounting inclination towards utilizing advanced data systems like ERPs (Oyewobi et al., 2022).

A well-integrated ERP system introduces a myriad of benefits. It offers unparalleled insights into supply chain management, which manual processes cannot match. With ERP, communication between suppliers, plants, stores, and every stakeholder becomes seamless. This holistic view ensures timely interventions and process streamlining, ultimately culminating in timely product deliveries (Masouras et al., 2021).

One of the predominant pain points for organizations has been unanticipated business interruptions. Operational hindrances like late shipments from vendors, unexpected breakdowns in production lines, and logistical mishaps in distribution channels can severely dent a company's image and bottom line. An effectively deployed ERP minimizes these delays, ensuring more consistent on-time deliveries across the chain (Oyewobi et al., 2022).

Another boon of ERP is its ability to foster enhanced collaboration. It puts a company in a commanding position, monitoring actions across the supply chain. With uninterrupted flow of critical data - demand forecasts, inventory levels, production statuses, to name a few - the entire supply chain functions cohesively (Shetty & Panda, 2022).

From a financial perspective, ERP systems have proven instrumental in cost-cutting. By optimizing inventory management and operational efficiency, ERPs can lead to significant savings. Furthermore, they can help firms negotiate better terms with vendors, capitalizing on opportunities like volume discounts. The benefits of ERP stretch across various dimensions. From an operational standpoint, it promises better performance, quality, and customer service while reducing costs. Strategically, it aids business growth, fosters alliances, underpins innovation, and facilitates robust external relationships (Lu et al., 2021). In terms of organizational dimension, it fosters organizational change, eases company-wide learning, empowers individual roles within the operational cycle, and grants a unified organizational vision.

While ERP's advantages are compelling, it's crucial to also recognize its implementation challenges. A spectrum of critical success factors, ranging from project planning, organizational alignment, to adequate resource allocation, need meticulous attention (Iranmanesh et al., 2022). A lapse in any of these facets can jeopardize the entire implementation, leading to heavy financial losses, as evidenced by several large enterprises across the globe (Jia et al., 2022).

Moreover, as businesses stride into the future, the synergy between ERP systems and web-based applications will gain paramount importance. The heightened user expectations will compel businesses to extract even more from their ERP systems, intertwining them with analytical tools to fine-tune business strategies in real time (K. Singh & Rastogi, 2022). Despite the challenges, the overriding consensus remains – the rewards of an ERP system, when properly harnessed, far outweigh its challenges.

Accounting Information System

It is a system of collecting, storing and processing financial and accounting data that are used by decision makers (Nguyen et al., 2021). Ali and AlSondos (2020) examine the effect of digital accounting systems on decision-making quality in the banking sector. Their findings reveal that digital AIS significantly improve the quality of decisions by providing timely, accurate, and relevant financial information. This enhancement in decision-making capabilities is critical for SMEs, as it enables better resource allocation, strategic planning, and performance monitoring.

Abedin, Douglas, Watson, and Bidar (2021) highlight the role of AIS in supporting corporate sustainability through a contingency-based approach. Their study suggests that AIS tailored to the specific needs of an organization can significantly contribute to sustainability by providing accurate data for environmental and social performance tracking. For SMEs, adopting AIS that incorporate sustainability metrics can aid in achieving long-term environmental and economic goals.

The research suggests that tangible benefits like operational efficiency, streamlined workflows, and reduced redundancy are key drivers that persuade organizations to adopt AI systems. While tangibility in ERP systems has traditionally been associated with their physical attributes, the evolving technological landscape has shifted this perception. Today, the tangible benefits, in terms of performance enhancements and operational efficiencies, are the predominant factors determining the success and acceptance of ERP systems. Whether in the realm of Cloud ERPs or in the challenging environment of developing nations, the tangible impact of these systems on organizational workflows and outcomes remains a crucial consideration. Hence, the current study hypothesizes the following:

Reliability, an essential criterion in evaluating systems and methodologies, plays a pivotal role in assessing the impact and effectiveness of AI systems. Reliability in the context of AI systems means that the software must consistently function as intended, providing accurate data and reliable performance, which in turn supports the organization's operations, strategic decision-making, and overall efficiency. The reliability of AI systems is a critical factor that underpins their effectiveness and value to organizations. It ensures that AI systems consistently deliver accurate and dependable information, supporting various business functions and strategic initiatives. Continuous assessment, fine-tuning, and methodological rigor are necessary components to ensure the reliability of any AI system. Therefore, the current study hypothesizes the following:

Responsiveness, the ability of a system or process to adjust quickly to changing conditions or unexpected events, is pivotal when considering the efficacy and utility of AI systems. The responsiveness of an AI system

also plays a significant role in its ability to support strategic initiatives and drive organizational performance. For instance, during periods of rapid growth or market expansion, an AI system must be able to scale its operations without compromising on performance. Similarly, in times of economic downturn or crisis, the system should help the organization quickly pivot its strategies and operations to mitigate risks and capitalize on new opportunities. This adaptability is particularly vital for SMEs, which often operate with limited resources and cannot afford prolonged disruptions or inefficiencies.

Assurance, in the context of AI systems, refers to the confidence and guarantee that the system will consistently meet its objectives and perform its functions without failure. Assurance in AI systems is a multifaceted concept that encompasses reliability, data integrity, compliance, scalability, and user satisfaction. The studies by Saeed, Shaikh, and Naqvi (2018) and Belloci, Lehto, and Nof (2019) highlight the importance of assurance in various aspects of AI systems, from specific modules like supply chain management to overall information quality. The assurance provided by an AI system is a key factor influencing its adoption, reliance, and success in modern enterprises. Therefore, the current study hypothesizes the following:

Empathy, traditionally defined as the capacity to understand and share the feelings of others, has recently garnered interest across various disciplines, including its potential influence on AI systems. While empathy may not be an immediately apparent component in the design and operation of AI systems, the studies conducted by Jing et al. (2022) and Lu, Liu, and Song (2020) highlight the significant influence empathy can have on decision-making processes. Recognizing and integrating these insights into AI design and user experience can pave the way for more intuitive, user-centric systems. This is particularly crucial in sectors where understanding and addressing emotional and empathetic considerations are essential for success. By embracing empathy in AI system design, organizations can create more effective and supportive environments, ultimately enhancing overall performance and user satisfaction.

This study aims to achieve the following objectives:

- 1) To investigate the impact of accounting information system dimensions (tangibility, reliability, responsiveness, assurance, and empathy) on the enterprises resources planning in the Libyan SMEs
- 2) To identify the impact of accounting information system dimensions (tangibility, reliability, responsiveness, assurance, and empathy) on the SMEs performance in Libya
- 3) To examine the impact of enterprises resources planning on the SMEs performance in Libya
- 4) To investigate the mediation role of ERP adopting between AIS dimensions (tangibility, reliability, responsiveness, assurance, and empathy) and small and medium enterprises performance in Libya.

METHODOLOGY

This research has been located at Tripoli city (the capital city in Libya); because most of the small and medium enterprises are located there. The study employs quantitative methods to collect data, primarily utilizing a questionnaire designed for its effectiveness in extracting detailed information from the research sample. The quantitative methodology provides a robust framework for analyzing the data and deriving meaningful conclusions about the performance determinants of SMEs in Libya. The collected data will be analyzed using SPSS and Smart PLS software, which are well-suited for statistical and structural equation modeling. The data collection was executed through structured questionnaires, targeting a sample size of 384 participants from small and medium-sized enterprises (SMEs) in Libya, including owners, managers, and regular employees. Each section of questionnaire targeted specific information essential for understanding the performance determinants of SMEs in Libya. The development of the questionnaire was driven by the objective to assess the impact of accounting information systems on the performance of SMEs. To ensure respondents had adequate time to thoughtfully and accurately answer each item, they were allotted 50 minutes to complete the questionnaire.

RESULTS

For the purpose of reduction, the unusable questionnaire and improving the responding rate, 500 questionnaires were distributed to the sample. From the distributed questionnaires, 423 were returned and collected, 384 questionnaires were the net returned and usable questionnaires with a percentage of 76.8%, as 39 questionnaires are neglected due to incomplete information. Table 1 shows the respondents profile for those participated in the study.

Table 1 Profile of Respondents (N = 384)

| | | n | % | | |
|--------------|-----|-------|-----------------|-----|------|
| Gender | | | Education Level | | |
| Male | 239 | 62.3 | Diploma | 113 | 29.4 |
| Female | 145 | 37.7 | Bachelor | 235 | 61.2 |
| | | | Master | 36 | 9.4 |
| Age | | | Experience | | |
| 18-25 years | 11 | 2.9% | 1 to 3 years | 46 | 12.2 |
| 26-30 years | 143 | 37.2% | 4 to 6 years | 333 | 86.7 |
| 31- 35 years | 132 | 34.4% | 7 to 9 years | 5 | 1.1 |
| 36- 40 years | 98 | 25.5% | | | |

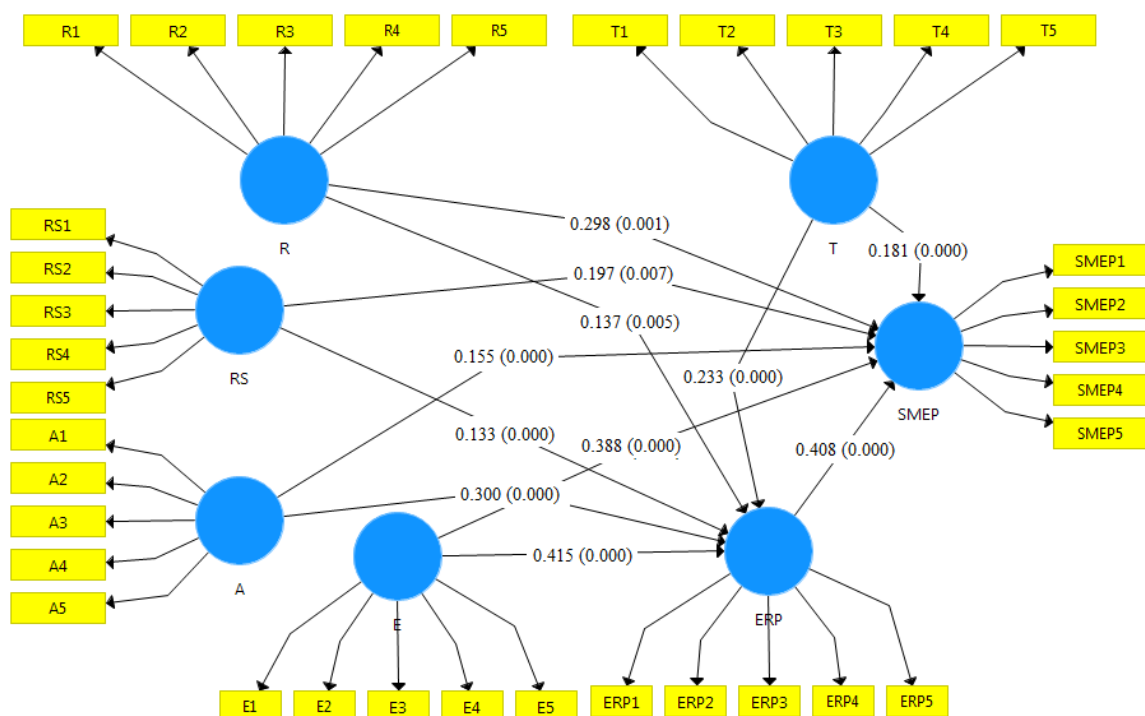
62.3% of the participants belongs to the male gender category and (n=239), while 37.7% of the participants belongs to the female gender category (n=145). The age levels of the participants divided into 4 categories, where 2.9% ranged between 18-25 years of age with n = 11, 37.2% ranged between 26-30 years of age with n = 143, 34.4% ranged between 31-35 years of age with n = 132, and 25.5% ranged between 36-40 years of age with n = 98 from the sample.

Most of the participants hold a bachelor degree with a percentage of 61.2% with n = 235, for diploma degree 29.4% with n = 113, and for the master level 9.4% with n = 36. The experience of the participants ranged between 1 to 9 years, 86.7% of the participants has an experience from 4 to 6 years with n = 333, 12.2% has an experience from 1 to 3 years with n = 46, and only 1.1% has an experience from 7 to 9 years with n = 5.

Table 2 Descriptive Statistics for Study Variables

| | N | Min | Max | Mean | Std. Deviation |
|------------------|-----|-----|-----|-------|----------------|
| Tangibility | 384 | 1 | 5 | 3.436 | 0.210 |
| Reliability | 384 | 1 | 5 | 3.219 | 0.669 |
| Responsiveness | 384 | 1 | 5 | 3.983 | 0.580 |
| Assurance | 384 | 1 | 5 | 3.098 | 0.273 |
| Empathy | 384 | 1 | 5 | 3.348 | 0.909 |
| ERP adoption | 384 | 1 | 5 | 3.145 | 0.532 |
| SMEs performance | 384 | 1 | 5 | 3.990 | 0.563 |

These results of Table 2 mean that respondents are in average agreement with the items stated for each variable in the questionnaire. Therefore, the respondents confirm the role of the independent variables on the dependent variable.

**Figure 1 Structural Model of the Study**

All the hypotheses of this study have been tested through the application of PLS-SEM. The statistical result indicates a good fit. The complete model shown in Figure 1 has a total of eleven hypotheses. For the assessment of the structural relationships among the identified variables for this study, the t-value is considered. According to hair et al. (2017) the t-value should be 1.65 and above (one-tailed) to be considered as statistically significant.

Hypothesis Testing (Direct Effect)

This section presents the result of hypotheses testing for direct effect. The results are presented in table 3, followed by some conclusions.

Table 3 Summary of the Direct Effect

| Paths | Beta | Standard Deviation | T Values | P Values |
|-------------|-------|--------------------|----------|----------|
| TAN -> SMEP | 0.181 | 0.022 | 8.087 | 0.000 |
| REL -> SMEP | 0.298 | 0.089 | 3.334 | 0.001 |
| RES -> SMEP | 0.197 | 0.069 | 2.846 | 0.007 |
| ASS -> SMEP | 0.155 | 0.018 | 8.838 | 0.000 |
| EMP -> SMEP | 0.388 | 0.063 | 6.156 | 0.000 |
| ERP -> SMEP | 0.408 | 0.075 | 5.466 | 0.000 |

The direct effect test has revealed the following:

- There is a positive and significant relationship between tangibility and SMEs performance in Libya with beta = 0.181, t value = 8.087, and significant level = 0.000.
- There is a positive and significant relationship between reliability and SMEs performance in Libya with beta = 0.298, t value = 3.334, and significant level = 0.001.
- There is a positive and significant relationship between responsiveness and SMEs performance in Libya with beta = 0.197, t value = 2.846, and significant level = 0.007.
- There is a positive and significant relationship between assurance and SMEs performance in Libya with beta = 0.155, t value = 8.838, and significant level = 0.000.
- There is a positive and significant relationship between empathy and SMEs performance in Libya with beta = 0.388, t value = 6.156, and significant level = 0.000.
- There is a positive and significant relationship between ERP adoption and SMEs performance in Libya with beta = 0.408, t value = 5.466, and significant level = 0.000.

Hypothesis Testing (mediation effect)

In this section, the results on assessing the mediating effect of ERP adoption on the relationships of (tangibility, reliability, responsiveness, assurance, empathy, ERP adoption, and SMEs performance) and the SMEs performance in Libya. These results are presented in the following table 4 as the result of the mediating effects (Indirect Effect), followed by some conclusions.

Table Error! No text of specified style in document. Mediation Testing (Indirect Effect)

| Paths | Path a | Path b | Indirect Effect | SE | t-value | Decision |
|--------------------|--------|--------|-----------------|-------|---------|-----------|
| TAN -> ERP -> SMEP | 0.760 | 0.124 | 0.094 | 0.041 | 2.299 | Mediation |
| REL -> ERP -> SMEP | 0.249 | 0.652 | 0.162 | 0.048 | 3.382 | Mediation |
| RES -> ERP -> SMEP | 0.816 | 0.207 | 0.169 | 0.056 | 3.016 | Mediation |
| ASS -> ERP -> SMEP | 0.743 | 0.207 | 0.154 | 0.044 | 3.495 | Mediation |
| EMP -> ERP -> SMEP | 0.892 | 0.505 | 0.193 | 0.078 | 3.905 | Mediation |

The results showed the following conclusions:

- ERP adoption mediates the relationship between tangibility and the SMEs performance in Libya with mediation = 0.094, t value greater than 1.69, which is 2.299, lower level = 0.014, and upper level = 0.175.
- ERP adoption mediates the relationship between reliability and the SMEs performance in Libya with mediation = 0.162, t value greater than 1.69, which is 3.382, lower level = 0.068, and upper level = 0.256.
- ERP adoption mediates the relationship between responsiveness and the SMEs performance in Libya with mediation = 0.169, t value greater than 1.69, which is 3.016, lower level = 0.059, and upper level = 0.279.
- ERP adoption mediates the relationship between assurance and the SMEs performance in Libya with mediation = 0.154, t value greater than 1.69, which is 3.495, lower level = 0.068, and upper level = 0.240.
- ERP adoption mediates the relationship between empathy and the SMEs performance in Libya with mediation = 0.193, t value greater than 1.69, which is 3.905, lower level = 0.062, and upper level = 0.314.

DISCUSSION

The current research outcomes suggest a pervasive influence of accounting information system (AIS) attributes on the performance of SMEs in Libya. Each attribute—tangibility, reliability, responsiveness, assurance, empathy, and ERP adoption—has demonstrated a positive and significant relationship with SME performance. These findings are in alignment with prior research. For instance, a study by Trabulsi (2018) delves into the substantial effect of AIS on the performance of SMEs in Saudi Arabia, indicating that regions with similar socio-economic landscapes also recognize the criticality of AIS. Further affirmation comes from Hosain's (2019) research that identifies a robust impact of AIS on Bangladeshi SMEs' performance. The consistent patterns across these studies emphasize the universal significance of AIS for SMEs.

Diving deeper into the realm of technological adoptions, Al-Okaily et al. (2023) offer insights into how cloud-based AIS post-COVID-19 has positively affected Jordanian SMEs. This is evocative of the broader technological transition, of which ERP is an essential component, influencing organizational outcomes.

Interestingly, Putra (2019) focuses on factors stimulating SMEs' interests in using accounting applications. While this study doesn't directly correlate with performance, it underscores the expanding acceptance and trust in digital accounting solutions. This increased inclination can naturally lead to improved organizational efficiencies. Further, Kareem et al. (2021) provide a comprehensive view, elucidating how AIS, combined with knowledge management capabilities and innovation, enhances the performance of Iraqi SMEs. This multi-faceted approach is reminiscent of the Libyan SME landscape, where AIS attributes collectively enhance performance.

Ahmad & Al-Shbiel (2019) steer the discussion towards the mediating role of knowledge management between AIS and organizational performance in Jordanian industrial SMEs. Their findings resonate with the current study's results, underpinning the intertwined relationship between knowledge management, AIS, and performance. Hence, the direct effect tests from this study seamlessly integrate with previous literature, indicating a strong and positive influence of AIS attributes on SME performance. Whether in Libya, Saudi Arabia, Bangladesh, Jordan, or Iraq, SMEs consistently exhibit a profound reliance on AIS for their growth and efficiency.

These results came in the context of the results of previous studies, where Y. L. P. Bravo et al. (2017) state that to produce products or services it is necessary to acquire and make available to the productive process three elements that are linked to transform a product available for sale. According to Halpern et al. (2015), evidencing how some voluntary or involuntary activities that occur within the organization generate economic impacts that affect financial results in achieving their strategic objectives, generating "dysfunctions", known as hidden costs which are results of the actions that must be put in place to counteract the aforementioned effects. According to Hirsch (2017), the hidden costs are not hidden by chance, because there is no appropriate tool for measuring them.

The mediation effect tests from the present research suggest that ERP adoption plays a pivotal role in mediating the relationships between various attributes of the accounting information system (AIS) and SME performance in Libya. Each attribute—tangibility, reliability, responsiveness, assurance, and empathy—indirectly influences SME performance via ERP adoption. The findings align seamlessly with Trabulsi (2018), which emphasized the significant implications of AIS on SME performance. The integral role of ERP systems in enhancing organizational performance can be viewed as an advanced facet of AIS. ERP adoption, acting as a mediator, further accentuates the relationship between AIS attributes and performance. The positive mediation effect of ERP adoption resonates with Hosain's (2019) research, which highlighted the significant impact of AIS on SME performance in Bangladesh. This consistency across studies underpins the universal nature of AIS's influence, accentuated by ERP adoption, on SMEs.

Al-Okaily et al. (2023), by examining cloud-based AIS post-COVID-19, provided insights into the transformative power of technological advancements in accounting. Their focus on the impact of such systems on Jordanian SMEs aligns with the mediation effect of ERP adoption observed in the present research. Moreover, the interconnectedness of AIS, knowledge management, and innovation was explored by Kareem et al. (2021), emphasizing how these elements collectively amplify the performance of Iraqi SMEs. This interconnectedness can be perceived in a Libyan context, where ERP adoption serves as a bridge connecting AIS attributes to SME performance. Ahmad & Al-Shbiel (2019) steer the narrative towards the mediating role of knowledge management between AIS and organizational performance. While knowledge management acts as a mediator in their context, the current study emphasizes the mediating prowess of ERP adoption. Yet, both mediators ultimately aim to harness the AIS for improved organizational outcomes. Therefore, the mediation tests in this study, combined with the insights from previous literature, illuminate the profound role of ERP adoption in harnessing the full potential of AIS attributes for SMEs. Whether in Libya, Saudi Arabia, Jordan, or Iraq, the studies converge on the understanding that ERP systems amplify the influence of AIS attributes on SME performance.

SMEs in Libya is considered as one of the promising sectors within the country, as the demand for the SMEs products increased rapidly over the last decade. These consequences drive the SMEs to be more aware for new entrants, those have higher capital market; will be able to gain the benefits of the latest technologies such as ERP (H. Lin & Liang, 2020). In addition, with these new entrants to the sector, the competition level will be stronger than past. The new condition of the SMEs industry varies from five years ago, several encouragements have affected the business environment, government encourage new entrants to this sector by providing a tax exemption for ten years, which it's not allowed for the old players within the industry (Y. Liu & van Hell, 2020). As well as, several SMEs products patents become available, which encourage many investors to manufacture it locally. Despite the highest competition within the industry, several SMEs lack the adoption of ERP system (McWeeny & Norton, 2020).

Drawing from the comprehensive results of the mediation effect tests, this research provides valuable insights that can be instrumental for SMEs, particularly those operating within Libya. Recognizing the mediating role of ERP adoption in enhancing the relationship between AIS attributes and SME performance, businesses can harness this knowledge for tangible benefits.

A study by Trabulsi (2018) emphasized the crucial impact of AIS on SME performance, and given this backdrop, the current research's elucidation on the amplifying role of ERP adoption offers SMEs a roadmap to maximize their operational efficiency. By focusing on integrating ERP systems, SMEs can better realize the potential benefits of their AIS.

Hosain (2019), in a Bangladeshi context, showcased the pivotal impact of AIS on SME outcomes. Reflecting on such insights, Libyan SMEs, armed with the findings from the current study, can strategize their ERP implementations to foster better alignment between their AIS functionalities and overall performance metrics. The research by Al-Okaily et al. (2023) underscored the transformative potential of cloud-based AIS in the post-COVID-19 landscape. In a similar vein, the current study's emphasis on ERP adoption as a mediator can guide SMEs towards optimizing their cloud-based AIS platforms, ensuring they remain agile and competitive in a rapidly evolving business environment.

Drawing parallels with Kareem et al. (2021), where the interplay between AIS, knowledge management, and innovation was explored, Libyan SMEs can contextualize these insights. Recognizing ERP adoption as a catalyst, businesses can strive for an interconnected ecosystem, where AIS attributes seamlessly contribute to organizational performance.

To sum up, the practical contribution of the current study is twofold. Firstly, it offers SMEs a clearer understanding of the role of ERP systems in bridging AIS attributes with performance outcomes. Secondly, by juxtaposing the findings with the existing literature, SMEs are provided with a holistic perspective, enabling them to make informed decisions that resonate with global best practices.

The current research, while offering insightful findings, has certain inherent limitations. Firstly, the study's focus on Libyan SMEs narrows its generalizability to other regional or international contexts. Cultural, economic, and technological variations across regions might influence how AIS and ERP systems impact SME performance, thus affecting the applicability of the findings in a broader context. Secondly, the reliance on questionnaire surveys for data collection might introduce response bias, as respondents might provide socially desirable answers or might not fully understand the intricacies of the systems in question. The cross-sectional nature of the study also restricts its ability to capture the evolving dynamics of the relationship between AIS attributes, ERP adoption, and SME performance over time.

CONCLUSION

This study aimed to investigate the impact of AIS quality on the performance of Libyan SMEs. The findings of this study reveal a positive and significant relationship between five key dimensions of accounting information systems—tangibility, reliability, responsiveness, assurance, and empathy—and the performance of SMEs in Libya. These results contribute to the existing literature on accounting information systems by demonstrating their crucial role in enhancing SME performance. Drawing from the comprehensive results of the mediation effect tests, this research provides valuable insights that can be instrumental for SMEs, particularly those operating within Libya. Recognizing the mediating role of ERP adoption in enhancing the relationship between AIS attributes and SME performance, businesses can harness this knowledge for tangible benefits. Based on these insights, it is recommended that businesses with well- designed and efficiently managed accounting information systems are more likely to achieve higher levels of success.

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