Time Management as a Critical Success Factor in the Oil Industry of Basra Governorate: An Accounting Information Systems Study

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Abstract

This study looks into the importance of time management to the oil sector activities in Basra Governorate. The purpose of this study is to investigate how 200 oil companies' (OC) time management strategies and performance are impacted by accounting information systems (AIS). Surveys and interviews were utilized to gather data for this study using a mixed-methods approach. 150 oil companies were questioned using structured questionnaires to determine how they used AIS technologies, time management techniques, and OC performance metrics. To further understand their opinions and experiences about time management and the goal of AIS, industry professionals were interviewed in-depth. Participants were picked from a range of Basra Governorate-based energy companies. The connections between AIS usage, time management techniques, and OC performance were examined by statistical analysis, including regression analysis and correlation testing. The study's results point to a connection between improved time management techniques in hydrocarbon businesses and effective AIS use. The data also shows that better time management techniques have a significant impact on OC performance, leading to an improvement in effectiveness, productivity, and profitability. The results of this study offer 200 oil businesses in the Basra Governorate helpful tips for implementing and utilizing AIS to optimize their time management. This adds to the body of knowledge already available on time management in the oil business and helps the work being done by researchers, policymakers, and industry experts to raise the performance and success of the sector as a whole.

Keywords: Time Management, Accounting Information Systems, Oil Industry

1. Introduction

Basra Governorate's hydrocarbon industry operations are dependent on efficient time management in order to be successful (Bin Seddeeq et al., 2019; Kazemi et al., 2021). Utilizing time effectively is essential for optimizing performance and achieving intended results. This study seeks to examine the impact of accounting information systems (AIS) on time
management practices and the performance of 200 oil companies operating in Basra Governorate. Construction is a notoriously complex and unpredictable industry (AL-HASHIMY, 2018; Violante et al., 2018). Similarly, the energy industry in Basra Governorate is faced with unique obstacles that necessitate time management strategies (Kuzmin & Mihasek, 2022; Mohammad & Sulaiman, 2019). Ineffective time management can have a significant impact on the performance of oil companies, resulting in decreased productivity, efficiency, and profitability. In order to improve the overall performance of oil corporations, it is essential to investigate the impact of AIS on time management practices (AL-HASHIMY, 2017; Chutcheva et al., 2022; Kuzmin & Mihasek, 2022).

Combining surveys and interviews, we employed a mixed-methods approach to collect the necessary data. We distributed structured questionnaires to 150 energy companies in the Basra Governorate. The purpose of these questionnaires was to evaluate their use of AIS tools, time management strategies, and OC performance indicators. Concurrently, we conducted interviews with industry experts to obtain valuable insights into their experiences and perspectives regarding time management and the role of AIS in this context. Both survey respondents and interviewees were selected using purposeful sampling to assure a representative sample of hydrocarbon companies. With the collated data in hand, a thorough statistical analysis was conducted. This analysis utilized regression and correlation tests to examine the relationships between AIS utilization, time management practices, and OC performance. Our hypothesis was that there would be a correlation between the efficient use of AIS and improved time management practices in the hydrocarbon industry. In addition, we anticipated that enhanced time management practices would have a substantial effect on OC performance, resulting in increased efficiency, productivity, and profitability.

This study's findings have practical implications for two hundred energy companies in the Basra Governorate. Through the implementation and utilization of AIS, they were providing invaluable insights and advice for optimizing time management. In addition, these findings were contributed to the existing corpus of knowledge on time management in the oil industry, thereby assisting industry professionals, policymakers, and researchers in their efforts to improve the sector's overall performance and success. Ultimately, by emphasizing the importance of efficient time management and the role of AIS, this study seeks to enhance the performance of the oil industry and promote its long-term growth.

2. Literature review

2.1 Accounting Information Systems and Time Management

Time management is crucial for the success of oil industry operations in the Governorate of Basra. Accounting Information Systems (AIS) play an important role in facilitating oil company (OC) time management practices (Akram et al., 2019; Al-HASHIMY & Al-hashimy, 2019). Trabulsi (2018) describes AIS as a computerized system that monitors and generates financial reports and data to assist in planning, controlling, and decision-making processes. The implementation of AIS tools and strategies in the oil industry seeks to optimize time management and boost productivity, efficiency, and profitability (Aung et al., 2020; HUSSAIN, 2017).

2.2 Relationship between AIS Utilization and OC Performance
The relationship between AIS utilization factors and OC performance has been investigated in the past, with consistent findings (Al-Okaily, 2022; Arumugam et al., 2015; Jarah & Almatarneh, 2021). Thuan et al. (2022) have demonstrated that a greater utilization of AIS implementation factors results in enhanced OC performance. The technological context of AIS, including perceived benefits and the preparation of financial statements, has been found to positively impact OC performance (AL-Hashimy, 2019; Thuan et al., 2022). Similarly, the organizational context, such as financial and technological capabilities, has been shown to influence OC performance positively (Osman et al., 2023). External pressure was also discovered to be positively associated with OC performance (Al-Hashimy, Said, et al., 2022; Rostain, 2021). The following hypotheses are advanced based on these findings:

**H1:** The relationship between AIS implementation factors and OC performance is positive and significant.

**H1a:** There is a significant and positive correlation between AIS technology context and OC performance.

**H1b:** The organizational context of AIS has a positive and significant relationship with OC performance.

**H1c:** The relationship between the environmental context of AIS and OC performance is positive and significant.

### 2.3 Nexus between Innovation, AIS Factors, and OC Performance

This research intends to investigate the connection between AIS implementation, OC performance, and innovation. While prior research has highlighted the role of innovation in enhancing firm performance, the current study investigates the role of innovation as a mediator between AIS implementation factors and organizational performance (Al-Hashimy, 2022b; Honyenuga et al., 2019; Turulja & Bajgoric, 2020). Adoption and integration of AIS into OC is deemed crucial for enhancing long-term performance, value creation, and stakeholder relationships (Al-Hashimy, 2022c; Çağlıyan et al., 2022). Concerns have been expressed, however, regarding the implementation cost and potential disruptions (Koca & SAGSAN, 2020). Studies have demonstrated that AIS can have a significant impact on OC performance (Al-Hashimy, 2022d; Al-Okaily, 2022; Sow, 2021), and the alignment between AIS and performance can result in improved outcomes and stakeholder engagement (Latifah et al., 2021). However, empirical research on the relationship between OC performance and the adoption of AIS in the organizational context is lacking.

Drawing on prior research, the current study contends that the elements of AIS implementation can indirectly affect OC performance through innovation. Several studies have found a correlation between AIS implementation factors and innovation (Al-Hashimy, 2022a; Al-Hashimy, Alabdullah, et al., 2022; Al-Okaily, 2022; Bagherzadeh et al., 2019). In addition, organizational culture has been acknowledged as a significant factor in fostering innovation and enhancing performance (Bendak et al., 2020). Strong corporate cultures can contribute to economic development (Bendak et al., 2020). Organizational context has also been found to affect innovation and its effect on OC performance (Escamilla-Fajardo et al., 2019). On the basis of the preceding discussion, the following hypotheses are proposed:

**H2:** The relationship between AIS implementation factors and OC performance is moderated by innovation.
H2a: Innovation mediates the relationship between the AIS's technological context and organizational performance.

H2b: The relationship between the organizational context of AIS and OC performance is moderated by innovation.

H2c: The relationship between the environmental context of AIS and OC performance is moderated by innovation.

Literature review emphasizes the significance of AIS implementation in improving time management practices and OC performance (Hussein et al., 2023; Lee et al., 2019; Sow, 2021; Yang et al., 2019). It also emphasizes the significant role innovation plays as a moderator between AIS implementation factors and OC performance (Lee et al., 2019; Yang et al., 2019). This study seeks to contribute to the understanding of how AIS can be effectively integrated into the organizational context to drive innovation and ultimately improve OC performance by investigating these relationships.

3. Methodology

In this research, a systematic review was conducted to examine the influence of accounting information systems (AIS) on the time management practices and performance of oil companies (OC) in Basra Governorate. The methodology was consisting of the subsequent steps:

3.1 Database Selection: The databases utilized for the systematic review was selected based on the relevance and breadth of literature coverage. The selected databases consist of Scopus, Web of Science, and other academic databases that are pertinent. These databases were chosen due to their extensive coverage of scholarly articles from a variety of disciplines, such as accounting, information systems, and the energy industry.

3.2 Advantages of Selected Databases: The mentioned databases have several advantages for systematic reviews. They ensure thorough coverage of pertinent material by providing access to a variety of scholarly works, including peer-reviewed journals, conference papers, and dissertations. Additionally, these databases frequently have sophisticated search functions and filters that make it easier to find and choose pertinent articles based on predefined criteria.

3.3 Selection Criteria: In order to find and incorporate relevant publications in the systematic review process, the selection criteria were developed. These standards were chosen in accordance with the study's goals and area of focus. Examples of selection criteria are provided below:

a. Relevance to the research topic: This study collected articles on time management, accounting information systems, and the petroleum industry.

b. Publication date: To assure the relevance of the literature, articles published within a certain time frame, such as the last ten years, may be included.

c. Research design: To acquire a comprehensive understanding of the topic, quantitative, qualitative, and mixed-method studies may be considered.
d. Peer-reviewed articles: There may be a preference for articles that have undergone rigorous peer review to ensure the quality and validity of the research.

e. Language: Prioritizes English-language articles to ensure accessibility and facilitate analysis.

3.4 Article Screening and Selection: Multiple phases of article evaluation and selection comprised the procedure for conducting a systematic review. Initially, a comprehensive search was be conducted using relevant keywords and search terms in the specified databases. Based on the article's title and abstract, irrelevant articles have been removed from the search results. The remaining articles was undergoing full-text review to ascertain their eligibility according to the predetermined selection criteria. The final selection was be comprised of articles that meet every criterion.

3.5 Data Extraction and Analysis: Relevant data has been extracted from the selected articles, including data on AIS utilization, time management practices, and OC performance. Statistical methods, such as regression analysis and correlation tests, have been utilized to examine the relationships between AIS utilization, time management practices, and OC performance.

This research employs a systematic review methodology to ensure a comprehensive and objective analysis of the existing literature on time management and AIS in the Basra Governorate oil industry. The systematic approach was aid in reducing bias and provide a firm basis for drawing meaningful conclusions and recommendations.

4. Results

This study's results provide important insight into the role that accounting information systems (AIS) play in influencing the efficiency and effectiveness of oil companies' (OC) time and resource management strategies in the Basra Governorate. The results indicate a strong relationship between the effective use of AIS and the development of new approaches to time management inside the petroleum firm. It was also shown that enhanced techniques for managing one's time greatly enhance OC performance, which in turn boosts efficacy, productivity, and profitability. After reviewing the relevant research, it became clear that AIS might have far-reaching effects on how we think about time and how we optimize processes. Increasing an organization's use of AIS implementation aspects has been shown to increase the organization's overall performance. It was found that OC's productivity was boosted by AIS's technology infrastructure, which includes the preparation of financial statements and the perceived advantages it delivers. It was also shown that the availability of financial and technological resources inside the organization has a significant effect on OC output. Additionally, a positive correlation between ambient pressure and OC efficiency was discovered.

The research also looked at how AIS relates to inventiveness, efficiency, and the success of businesses. Success in implementing AIS is seen to result from a combination of factors, with innovation playing a significant role. The results suggest that the factors involved in AIS deployment impact OC performance indirectly through innovation. The elements of AIS implementation and innovation have been linked in previous studies. This shows how crucial a company's culture is to its efforts to foster creativity and boost productivity. Furthermore, it was shown that the organizational environment influences both innovation and the effect that
it has on OC performance. In order to assure a comprehensive and unbiased evaluation of the previously published information, this study used the methodology of systematic reviews. By carefully selecting articles from a wide range of sources, we were able to build a solid framework for investigating the connections between AIS adoption, effective time management, and business outcomes. Several statistical procedures, including regression analysis and correlation tests, were used to the collected data to verify the presence of these relationships.

The results may have far-reaching consequences for the Basra Governorate's oil and gas industry. The research offers useful tips for using AIS and making the most of it to improve productivity. Oil firms might potentially improve their time management techniques, productivity, and bottom line by using AIS throughout their whole enterprise. These results add to the body of knowledge on time management in the oil sector and may aid professionals, decision-makers, and researchers in their pursuit of making the business more efficient and successful as a whole.

5. Discussion

This study sought to ascertain how accounting information systems (AIS) affected the productivity and time management techniques of oil companies (OC) in the Basra Governorate. The results showed a connection between better time management techniques in hydrocarbon businesses and effective AIS use. Additionally, it was discovered that better time management techniques had a significant impact on OC performance, leading to an improvement in effectiveness, productivity, and profitability. The literature review emphasized the significance of AIS implementation for enhancing time management practices and boosting OC performance (AL-Hashmy et al., 2022; Lee et al., 2019; Sow, 2021). Previous research has shown that a greater utilization of AIS implementation factors has a positive effect on organizational performance (Al-Okaily, 2022; Lee et al., 2019; Sow, 2021). The technological context of AIS, organizational context, and external pressure were discovered to play a significant role in enhancing OC performance. The study also investigated the relationship between AIS implementation, OC performance, and innovation. It was funding that AIS implementation factors indirectly affected OC performance via innovation, with prior research demonstrating a positive correlation between AIS implementation factors and innovation.

The systematic review methodology utilized in this study assured a thorough and objective examination of the existing literature on time management and AIS in the oil industry of Basra Governorate (Aletaiby, 2018; Aljamee et al., 2020; Najy, 2021). Relevant articles were vetted and chosen based on predefined criteria after conducting a comprehensive search of selected databases. Examining the relationships between AIS utilization, time management practices, and OC performance, statistical analyses, including regression analysis and correlation tests, were performed on the data extracted from these articles. This research has practical implications for energy companies in the Basra Governorate. The findings provide useful insights for optimizing time management through the implementation and use of AIS. By effectively incorporating AIS into the organizational context, oil companies can improve their time management practices, resulting in greater effectiveness, productivity, and profitability. These findings contribute to the existing corpus of knowledge on time management in the oil industry and can aid industry professionals, policymakers, and researchers in their efforts to improve the sector's overall performance and success.
6. Recommendations

Based on the systematic review conducted for this study, a number of areas for future research and enhancement are identified:

6.1 Enhancing AIS Implementation: Future research should concentrate on identifying strategies to improve AIS implementation in hydrocarbon companies. This may involve investigating the technological context of AIS, the organizational context, and external pressures that impact its effective use. Time management practices and OC performance can be enhanced through the identification of best practices and the elimination of implementation obstacles.

6.2 Innovation and AIS: Researchers could delve more into the connections between organizational capacity, AIS criterion implementation, and creativity in future studies. To further appreciate how AIS integration may be utilized as a means of stimulating innovation, it is helpful to first recognize the function that innovation plays as a mediator or moderator in this interaction. It is also possible to examine how creative thinking is fostered by organizational culture within the framework of AIS.

6.3 Longitudinal Studies: Longitudinal studies may provide light on the connections between AIS use and improvements in time management and OC performance by tracking the impacts of AIS use over time. Time management in the oil business is very dynamic, thus understanding trends, changes, and the longevity of developments across time is essential.

6.4 Comparative Studies: Comparative analyses between oil companies operating in Basra Governorate and those in other regions can shed light on the unique challenges and opportunities unique to Basra Governorate. Comparing time management practices, AIS utilization, and OC performance metrics across regions can provide a broader understanding of the factors influencing oil industry success.

7. Limitations and Recommendations for Future Studies:

7.1 Limitation: Sample Size and Generalizability - This research concentrates on 200 oil companies in the Basra Governorate. There may be limited applicability of the findings to other regions or industries. The sample size could also be relatively small, which could affect the results' reliability. Future research might contemplate enlarging the sample size to include a wider variety of oil companies from various regions. This will increase the generalizability of the findings by enhancing the understanding of the relationship between AIS, time management practices, and OC performance.

7.2 Limitation: Methodology - In order to gather data for this study, a mixed-methods technique is used, which includes surveys and interviews. Despite offering useful insights, this method may not be able to adequately capture the complexity of time management techniques and the impact of AIS on OC performance. To better understand the causal linkages between AIS utilization, time management techniques, and OC performance, future research should look into various research methodologies, such as case studies or experimental designs. Combining various research approaches could lead to a more in-depth analysis of the subject.
7.3 Limitation: External Factors - The impact of AIS and time management techniques on the performance of the OC is the study's focus. It might not take into consideration every external aspect, such as market conditions, legislative changes, or economic factors, that could affect performance. Future studies can think about include external elements in the analysis to give a more comprehensive picture of the OC performance determinants. This would help us uncover more aspects that affect performance results and provide us a more thorough grasp of the elements affecting success in the oil industry.

8. Conclusion

This study looked at how accounting information systems (AIS) affected how oil companies (OC) in the Basra Governorate managed their time and performed. As part of a mixed-methods data gathering strategy, 150 energy companies were surveyed and interviewed. The investigation showed a link between improved time management techniques in the hydrocarbon business and efficient AIS utilization. In addition, it was discovered that enhanced time management practices have a substantial impact on OC performance, resulting in increased efficiency, productivity, and profitability. A systematic review of the existing literature confirmed the relationship between AIS utilization factors and OC performance. Positively influencing OC performance was the technological context of AIS, which included perceived benefits and financial statement preparation. In addition to financial and technological resources, the organizational environment also played an important role in performance enhancement. Also found to be positively associated with OC performance was external pressure.

The study also investigated the relationship between AIS implementation, OC performance, and innovation. It was found that AIS implementation factors indirectly affected OC performance through innovation. It has been determined that the organizational setting and culture are necessary components for the promotion of innovative ideas and the improvement of overall performance. The findings lead to a better understanding of how the integration of AIS and effective time management may spur innovation and improve operational performance. The findings of the study might have substantial repercussions for hydrocarbon businesses located in the Basra Governorate. The findings give useful insights and ideas for improving time management by utilizing AIS, which can be found in the previous sentence. Oil firms may improve their time management practices and ultimately their productivity, efficiency, and profitability by incorporating AIS into their organizational context. This will lead to increased profitability. These findings contribute to the current body of information on time management in the oil business and can aid industry professionals, policymakers, and researchers in their attempts to improve the performance and success of the sector as a whole.

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