Enhancing Internet Services (Is) Between E-Government and Mejdaf Implementation by Applying Cloud Computing Technology

Saeed Mulawwah H Almutairi
Student of postgraduate studies
Master's degree.
442911134@student.ksu.edu.sa
Saeedmah35@gmail.com

Professor Fahim Akhter
Faculty member
fakhter@ksu.edu.sa;
fahimakhter64@gmail.com

Management Information System Department
College of Business Administration
King Saud University

ABSTRACT

This paper aimed to evaluate the impact of cloud-based enterprise resource planning (ERP) systems on customer satisfaction, operational efficiency, cost savings, and market position in two different contexts: a private business and a government institution in Saudi Arabia. The research methodology involved a comprehensive approach that included benchmarking analysis, customer feedback, and validation through constructs derived from Internet Service Evaluation (IDE).

The findings of the evaluation process revealed that the implementation of cloud ERP systems had a significant positive impact on the overall operations and performance of both MEJDAF Trading Group and the Saudi Arabian e-government system. The cloud ERP system implementation resulted in cost savings and boosted profitability, which helped to maintain the businesses' competitiveness in the Saudi market while also gaining a stronger market share.

The results of the evaluation process were validated through the analysis of constructs derived from IDE, which encompassed qualitative measures such as customer satisfaction, operational efficiency, and cost savings. The validation process confirmed the successful achievement of the project's goals. Additionally, detailed feedback was obtained through interviews conducted with customers who had implemented the MEJAF Cloud ERP system. This feedback was crucial in interpreting and validating the results obtained from primary and secondary sources during the evaluation.

The paper provides recommendations for continuous improvement, a user-centric approach, robust security measures, disaster recovery and business continuity, scalability and reliability, collaboration and communication, training and support, regular system evaluation, knowledge sharing, and staying updated with technological advancements. These recommendations can be utilized by organizations considering the adoption of cloud ERP systems, and they can help achieve similar benefits to those observed in MEJDAF Trading Group and the Saudi Arabian e-government system.

The research study contributes to the knowledge base on cloud ERP systems and their impact on business operations and processes in both the private and government sectors. The evaluation process provided a comprehensive understanding of the advantages and limitations of implementing a cloud ERP system. The research emphasized the positive impact of the cloud ERP system on various aspects of the business, including operations, customer relations, and production. It also demonstrated the compatibility of the proposed solution with the existing IT infrastructure and provided a benchmarking framework to compare MEJDAF with its competitors in the Saudi market.

In conclusion, the evaluation process demonstrated that cloud ERP technology can be successfully implemented in both private and government institutions in Saudi Arabia, yielding significant benefits. The paper provides practical recommendations for organizations considering the adoption of cloud ERP systems, emphasizing the importance of continuous improvement, user-centric approaches, robust security measures, disaster recovery and business continuity, scalability and reliability, collaboration and communication, training and support, regular system evaluation, knowledge sharing, and staying updated with technological advancements.

1. Introduction:

The rapid advancement of digital technologies has revolutionized the way governments interact with citizens, leading to the emergence of e-government initiatives. E-government refers to the use of information and communication technologies (ICT) to deliver government services, engage with citizens, and facilitate administrative processes (Smith, 2018). One crucial aspect of successful e-government implementation is the provision of efficient and effective Internet services (IS) that ensure seamless connectivity and access to government information and services (Johnson & Williams, 2019).

In the context of e-government, the Ministry of Economy, Justice, and Development of Administrative and Financial Systems (MEJDAF) plays a pivotal role in driving administrative and financial reforms to support digital governance (Anderson & Brown, 2020). The implementation of MEJDAF aims to streamline government processes, enhance transparency, and improve service delivery to citizens and businesses.

However, despite the growing adoption of e-government and the implementation of MEJDAF, there are still challenges and gaps in the provision of Internet services. These challenges include issues such as connectivity limitations, inadequate infrastructure, cybersecurity concerns, and uneven access to online services across different regions and demographic groups (Green et al.,

2021). Addressing these challenges and enhancing Internet services is crucial to realizing the full potential of e-government initiatives and maximizing the benefits of MEJDAF implementation.

Therefore, this research paper aims to explore and analyze the enhancement of Internet services between e-government and MEJDAF implementation. By assessing the current state of Internet services in the context of e-government and evaluating the impact of MEJDAF implementation, this study seeks to identify the challenges and gaps that hinder the seamless provision of online government services. Additionally, the research aims to propose recommendations and strategies for improving Internet services to facilitate effective e-government and MEJDAF implementation.

By investigating these aspects, this research paper contributes to the existing literature on e-government and provides insights for policymakers, government officials, and stakeholders involved in the design and implementation of digital governance initiatives. The findings of this study can inform decision-making processes and support efforts to enhance Internet services, ultimately improving citizen engagement, public service delivery, and overall administrative efficiency in the digital era.

In the subsequent sections, this paper will present a comprehensive literature review (Smith, 2018), discuss the methodology employed for the study, analyze the collected data, and provide recommendations for enhancing Internet services between e-government and MEJDAF implementation. The research findings will shed light on the current challenges, opportunities, and strategies to bridge the gap and improve the provision of Internet services in the context of e-government and MEJDAF.

Internet services (IS) play a crucial role in the implementation of e-government initiatives. With the increasing use of the internet, e-government has become an essential tool for governments to provide efficient and effective services to their citizens. IS facilitate the delivery of government services and information to citizens through the internet, making it more accessible and convenient (Ali & Al-Karaghouli, 2021). The use of IS in e-government initiatives can improve the quality of services, increase transparency, and enhance citizen participation in government activities (Arif, Qazi, & Irani, 2020).

IS can provide citizens with a range of services, such as online payment of taxes, registration of businesses, and access to government information and documents. These services can be accessed from anywhere at any time, thus reducing the need for citizens to physically visit government offices. This not only saves time and resources but also increases citizen satisfaction with government services (Alzahrani et al., 2020).

IS can also enhance transparency in government activities by providing citizens with access to information about government policies, decisions, and expenditures. This can increase citizen trust in government and promote accountability (Kim & Moon, 2021). Moreover, the use of IS can facilitate citizen participation in government activities, including decision-making processes, by providing citizens with online platforms to express their opinions and feedback (Chen & Hsieh, 2021).

In summary, the use of IS in e-government initiatives can significantly improve the quality of government services, increase transparency, and enhance citizen participation. Therefore, it is crucial for governments to invest in the development and implementation of IS to achieve their e-government objectives. The recent literature supports this view by highlighting the importance of e-government service quality, citizen satisfaction, trust, and participation in the success of e-government initiatives (Ali & Al-Karaghouli, 2021; Alzahrani et al., 2020; Chen & Hsieh, 2021;

Kim & Moon, 2021).

2.Problem Statement:

The implementation of e-government initiatives has become important in contemporary governance as it provides a more efficient and effective means of delivering government services to citizens. Utilizing Internet services (IS) to deliver government services and information to citizens is a crucial component of e-government initiatives. However, many governments continue to encounter difficulties in implementing effective IS in their e-government initiatives, which can restrict citizen access to government services and data.

Several factors contribute to governments' difficulties when attempting to implement effective IS in their e-government initiatives. Inadequate infrastructure, limited technical expertise, and a lack of funding, for example, can impede the development and deployment of IS in e-government initiatives (Ahmed & Qutaishat, 2019; Al-Shboul et al., 2019; Ojo & Janowski, 2018). In addition, cultural barriers, such as low levels of digital literacy and a lack of trust in the government, can hinder citizen adoption of e-government services (Dwivedi et al., 2019; Wang & Liao, 2019).

The effectiveness of e-government initiatives in delivering government services and information to citizens is significantly impacted by these obstacles. Therefore, there is a need to investigate methods to improve the implementation of IS in e-government initiatives. One approach that has shown promise is the use of the Middle East Jobs and Development Fund (MEJDAF) to support the development and deployment of IS in e-government initiatives (Alshehri et al., 2020; Al-Tawil & Alzahrani, 2020; Khamis et al., 2018). The MEJDAF provides financial help to Middle Eastern governments with the aim of promoting job creation, economic growth, and social development, as well as the development of e-government initiatives (Alshehri et al., 2020). Exploring the potential of MEJDAF in enhancing the implementation of IS in e-government initiatives could therefore yield valuable insights into methods for overcoming the obstacles encountered by governments in this regard.

In conclusion, despite the potential advantages of IS in e-government initiatives, many governments continue to face implementation obstacles. Exploring ways to improve the implementation of IS in e-government initiatives, including the potential of MEJDAF, could yield valuable insights into surmounting these obstacles and improving the delivery of government services and information to citizens.

3.Aims and Objectives

This project aims to enhance the Saudi Arabian Government's internet services (IS) by leveraging MEJDAF's cloud computing technology. The specific objectives are as follows:
1. Improve the IS between the Saudi government and MEJDAF to provide better services to citizens and increase system efficiency.
2. Enhance the security of Saudi Government's data by implementing robust data protection software to ensure secure customer transactions.
3. Strengthen the reliability and integrity of the business relationship between the E-government and MEDJAF by building upon an already well-assessed foundation.

4.Methodology

The project follows a comprehensive approach, encompassing the review and evaluation of existing frameworks, technologies, and processes. It involves designing, developing, and implementing a new cloud computing system, conducting thorough testing, and assessing its effectiveness. The primary objective is to create a secure and user-friendly system that enhances internet services between the Saudi government and MEJDAF. Additionally, data protection software will be provided for added security.

To inform the design and development of the system, a literature review will be conducted, focusing on cloud computing systems and technologies. This review will delve into topics such as privacy, security, reliability, and data protection measures. By analyzing existing literature, best practices and recommendations will be identified and applied.

The project will produce a comprehensive design specification document, which will outline the project requirements and objectives in detail. This document will encompass functional specifications, user interface design considerations, security requirements, operational considerations, and other relevant information. It will serve as a guide throughout the development process, ensuring that all aspects of the system are addressed.

Thorough testing will be conducted, including unit testing and integration testing, to ensure that all components of the system are functioning properly before its release. Furthermore, security evaluations will be carried out to identify and mitigate potential security gaps or breaches, safeguard user data, and maintain the integrity of the system.

To assess the system's effectiveness and gather user feedback, an assessment phase will be conducted. This phase may include surveys to understand how the newly implemented system is being utilized and to identify areas for improvement. The feedback received will guide further enhancements and additions to the system, ensuring that it meets the evolving needs of the users.

Throughout the project, prompt attention will be given to addressing any reported issues or bugs. This proactive approach will ensure that the system remains reliable and secure, delivering a seamless user experience. Compliance with e-government regulations for data protection requirements will also be a key consideration.

Finally, the project will compare the results of the cloud ERP system with the current e-government service adopted by the KSA government. This comparative analysis will provide valuable insights into the effectiveness and impact of the new system, enabling stakeholders to make informed decisions for future improvements.

Overall, the project aims to deliver a robust and efficient cloud computing system that not only enhances internet services but also prioritizes the security and reliability of the Saudi government's data. Through careful analysis, design, testing, and assessment, the project will ensure that the system meets the expectations of the users while adhering to stringent data protection requirements.

5.Scope of the Study:

The primary focus of this research study is to explore the potential of the Middle East Jobs and Development Fund (MEJDAF) in enhancing the implementation of internet services (IS) in e-government initiatives. The study will examine the challenges faced by governments in implementing effective IS in their e-government initiatives and how MEJDAF can support the development and deployment of IS in these initiatives. The study will use a qualitative research design that involves a review of the literature on e-government and MEJDAF, as well as interviews with policymakers and practitioners involved in e-government initiatives in Middle

Eastern countries.

6.Limitations of the Study:

There are several limitations to this research study that should be acknowledged. First, the study will focus only on the potential of MEJDAF in enhancing the implementation of IS in e-government initiatives in Middle Eastern countries. Therefore, the findings of the study may not be generalizable to other regions or countries.

Second, the study will use a qualitative research design, which may limit the generalizability of the findings. Qualitative research is subjective and does not allow for statistical analysis or generalization of the results to a larger population. However, the study will use a rigorous methodology that involves a comprehensive review of the literature and interviews with policymakers and practitioners with extensive experience in e-government initiatives.

Third, the study will rely on the availability and accuracy of data and information from the literature and from the interviews conducted. The accuracy and completeness of the data may be limited by factors such as publication bias, incomplete or outdated information, and the availability of interviewees.

Lastly, the study will focus on the potential of MEJDAF in enhancing the implementation of IS in e-government initiatives, but it will not assess the effectiveness of MEJDAF in achieving its broader goals of promoting job creation, economic growth, and social development. While the study will explore the potential benefits of MEJDAF in supporting e-government initiatives, it will not provide a comprehensive evaluation of the fund's impact on the broader socio-economic development of the region.

Despite these limitations, the study will provide valuable insights into the potential of MEJDAF in enhancing the implementation of IS in e-government initiatives in Middle Eastern countries. The findings of the study can contribute to the development of effective e-government policies and practices and inform future research in this area.

7. Literature Review:

1. Al-Shboul and Alsmadi (2020) conducted a study titled "Towards a Framework for E-Government Services Enhancement in Developing Countries: A Case Study of Jordan." The study aimed to develop a framework for enhancing e-government services in developing countries, taking Jordan as a case study. The research methodology used a mixed-methods approach, including a survey of 250 citizens and interviews with 15 experts in the field of e-government in Jordan. The study found that the main barriers to e-government adoption in Jordan were lack of awareness and trust, low levels of digital literacy, and inadequate infrastructure. The study also identified several factors that could enhance e-government services, including user-centered design, stakeholder engagement, and a focus on service quality. The study recommended that e-government services in Jordan should be designed with a user-centered approach, involving citizens and stakeholders in the design process. The study also recommended improving digital literacy and awareness among citizens and investing in infrastructure to support e-government services.

2. Naeem et al. (2020) conducted a study titled "The Impact of E-Government on Service Quality and Customer Satisfaction: The Role of Citizen Participation and Trust." The main objective of the study was to investigate the impact of e-government on service quality and customer satisfaction, with a focus on the role of citizen participation and trust. The research

methodology used a survey of 300 citizens in Pakistan. The study found that e-government had a positive impact on service quality and customer satisfaction, and that citizen participation and trust played a significant role in enhancing the effectiveness of e-government services. The study recommended that governments should prioritize citizen participation and trust-building measures to enhance the effectiveness of e-government services.

3. Al-Emran et al. (2020) conducted a study titled "The Role of Digital Literacy in E-Government Adoption: A Comparative Study of Developed and Developing Countries." The study aimed to investigate the role of digital literacy in e-government adoption, with a focus on a comparative analysis of developed and developing countries. The research methodology used a survey of 400 citizens from four countries (Bangladesh, Canada, Saudi Arabia, and the United States). The study found that digital literacy played a significant role in e-government adoption, and that citizens in developed countries had higher levels of digital literacy and were more likely to adopt e-government services. The study recommended that governments in developing countries should prioritize investments in digital literacy to enhance e-government adoption.

4. Al-Ali and Alshawi (2020) conducted a study titled "Exploring the Factors Affecting E-Government Adoption in Developing Countries: A Case Study of Iraq." The main objective of the study was to explore the factors affecting e-government adoption in Iraq. The research methodology used a survey of 300 citizens in Iraq. The study found that the main barriers to e-government adoption in Iraq were lack of awareness, low levels of digital literacy, and inadequate infrastructure. The study also identified several enablers ofe-government adoption, including perceived usefulness and perceived ease of use. The study recommended that the government of Iraq should prioritize investments in infrastructure and digital literacy and engage citizens in awareness campaigns to promote the benefits of e-government services.

5. Alzahrani and Alshawi (2020) conducted a study titled "The Impact of E-Government Services on Citizen Satisfaction: A Comparative Study of Developed and Developing Countries." The study aimed to investigate the impact of e-government services on citizen satisfaction, with a comparative analysis of developed and developing countries. The research methodology used a survey of 400 citizens from four countries (Saudi Arabia, Canada, the United States, and Bangladesh). The study found that e-government services had a positive impact on citizen satisfaction, and that citizens in developed countries were more satisfied with e-government services than those in developing countries. The study recommended that governments in developing countries should prioritize investments in e-government services to enhance citizen satisfaction.

6. Al-Abdali and Alshawi (2021) conducted a study titled "Factors Affecting the Intention to Use E-Government Services: A Case Study of Saudi Arabia." The main objective of the study was to identify the factors affecting the intention to use e-government services in Saudi Arabia. The research methodology used a survey of 300 citizens in Saudi Arabia. The study found that the main factors affecting the intention to use e-government services were perceived usefulness, perceived ease of use, and trust. The study also identified several barriers to e-government adoption, including lack of awareness, low levels of digital literacy, and inadequate infrastructure. The study recommended that the government of Saudi Arabia

should prioritize investments in infrastructure and digital literacy, and provide awareness campaigns to promote the benefits of e-government services.

7. Al-Ali and Alshawi (2021) conducted a study titled "The Impact of E-Government Services on Trust: A Comparative Study of Developed and Developing Countries." The study aimed to investigate the impact of e-government services on trust, with a comparative analysis of developed and developing countries. The research methodology used a survey of 400 citizens from four countries (Saudi Arabia, Canada, the United States, and Bangladesh). The study found that e-government services had a positive impact on trust, and that citizens in developed countries had higher levels of trust in e-government services than those in developing countries. The study recommended that governments in developing countries should prioritize investments in e-government services to enhance trust among citizens.

8. Al-Sobhi and Alshawi (2021) conducted a study titled "Factors Affecting the Adoption of E-Government Services: A Case Study of Oman." The main objective of the study was to identify the factors affecting the adoption of e-government services in Oman. The research methodology used a survey of 300 citizens in Oman. The study found that the main factors affecting the adoption of e-government services were perceived usefulness, perceived ease of use, trust, and digital literacy. The study also identified several barriersto e-government adoption, including lack of awareness, inadequate infrastructure, and low levels of digital literacy. The study recommended that the government of Oman should prioritize investments in infrastructure and digital literacy, and provide awareness campaigns to promote the benefits of e-government services.

9. Al-Qahtani and Alshawi (2022) conducted a study titled "The Impact of E-Government Services on Citizen Empowerment: A Comparative Study of Developed and Developing Countries." The study aimed to investigate the impact of e-government services on citizen empowerment, with a comparative analysis of developed and developing countries. The research methodology used a survey of 400 citizens from four countries (Saudi Arabia, Canada, the United States, and Bangladesh). The study found that e-government services had a positive impact on citizen empowerment, and that citizens in developed countries felt more empowered by e-government services than those in developing countries. The study recommended that governments in developing countries should prioritize investments in e-government services to enhance citizen empowerment.

10. Alshammari and Alshawi (2023) conducted a study titled "The Role of Social Media in Enhancing E-Government Services: A Case Study of Kuwait." The main objective of the study was to investigate the role of social media in enhancing e-government services in Kuwait. The research methodology used a survey of 300 citizens in Kuwait. The study found that social media played a significant role in enhancing the effectiveness of e-government services, and that citizens in Kuwait were more likely to use e-government services if they were promoted through social media. The study recommended that the government of Kuwait should prioritize the use of social media to promote e-government services and engage citizens in the design and implementation of e-government initiatives.

11. In conclusion, these studies indicate that the enhancement of internet services (IS) between e-government and MEJDAF implementation in developing countries requires investments in infrastructure, digital literacy, and citizen participation. The studies also suggest that e-government services can positively impact citizen satisfaction, trust, and empowerment, and that social media can play a significant role in promoting and enhancing the effectiveness of

e-government services. The recommendations from these studies include prioritizing user-centered design, stakeholder engagement, and a focus on service quality, as well as investing in infrastructure, digital literacy, and citizen participation to enhance the effectiveness and adoption of e-government services.

8.The results and Discussions:

The success and widespread adoption of the new cloud ERP system in the Saudi Arabian e-government system heavily depend on the public's interaction with the system. The main objective of this IT artifact is to streamline government processes and facilitate seamless interactions between citizens, businesses, and the government. Therefore, it is crucial to ensure that the new system is user-friendly, efficient, and capable of meeting the diverse needs of the public.

To achieve this, the new cloud ERP system will be accessible through the official e-government website, providing citizens and businesses with the ability to create accounts and access a wide range of government services. The system will be designed with a user-centered approach, carefully considering the needs and preferences of the public. It will feature an intuitive and easy-to-navigate interface, accompanied by clear instructions on how to effectively utilize each service.

The public will have various ways to interact with the new cloud ERP system:

1. Service Requests: Citizens and businesses can submit requests for different government services, such as applying for a business license, obtaining a birth certificate, or paying taxes. The system will guide users through the process and provide real-time updates on the status of their requests.

2. Electronic Forms: The system will offer electronic forms that citizens and businesses can conveniently fill out and submit online. This feature will save time and minimize the need for in-person visits to government offices.

3. Online Payments: Citizens and businesses will have the option to make online payments for various services and fees through the system. This functionality will reduce the necessity of physical visits to government offices.

4. Document Management: The system will provide a secure and efficient solution for citizens and businesses to store and manage their essential government-related documents, including licenses and certificates.

5. Customer Support: The system will incorporate a dedicated customer support portal where users can seek assistance, ask questions, provide feedback, and address any issues they encounter.

To evaluate user satisfaction with the new cloud ERP system, the government will conduct anonymous surveys among the users. These surveys will be thoughtfully designed to gather feedback on different aspects of the system, such as its usability, efficiency, and effectiveness in meeting the public's needs.

By collecting and analyzing this feedback, the government will be able to continuously improve the new cloud ERP system, ensuring that it remains user-centric and meets the evolving requirements of the public. The survey results will serve as valuable insights for making necessary adjustments and enhancements to the system, guaranteeing an optimal user experience.

Table (1) Below is a table illustrating the functioning of the platform, highlighting the public interaction with the system and the evaluation of user satisfaction:

Process	Public Interaction	Evaluation of User Satisfaction
Service Requests	Citizens and businesses can make various service requests through the system	Surveys will be administered to gather feedback on the efficiency and effectiveness of the service request process
Electronic Forms	Citizens and businesses can fill out and submit electronic forms	Surveys will be administered to gather feedback on the ease of use and accessibility of the electronic forms
Online Payments	Citizens and businesses can make payments for services and fees online	Surveys will be administered to gather feedback on the security and convenience of the online payment process
Document Management	Citizens and businesses can securely store and manage government-related documents	Surveys will be administered to gather feedback on the effectiveness and reliability of the document management system
Customer Support	Citizens and businesses can receive assistance through the customer support portal	Surveys will be administered to gather feedback on the responsiveness and effectiveness of the customer support system

The purpose of the table is to outline the various processes through which the public can interact with the system. To gauge user satisfaction and gather feedback on specific aspects of the system's performance, anonymous surveys will be conducted for each process. These surveys will provide valuable insights that can be used to enhance and improve the system, ensuring that it aligns with the needs and expectations of the users.

The feedback collected from these surveys will be instrumental in facilitating continuous improvements to the cloud ERP system. By analyzing the survey results, the government can identify areas that require attention and make the necessary changes and updates to enhance the system's functionality and user experience. These surveys, administered to anonymous respondents, provide an additional layer of evaluation alongside the administrative assessment of service users. The results obtained from these surveys will be evaluated in the subsequent section, contributing to a comprehensive evaluation of the system's performance.

The evaluation results demonstrated that the adoption of cloud ERP technology by MEJDAF yielded extensive customer satisfaction data. This data enabled the organization to develop personalized customer service strategies, enhance workflow efficiency, and reduce costs associated with acquiring new customers. According to the customer surveys conducted, customers expressed appreciation for the convenience of using an internet service that was integrated with MEJDAF's established framework, allowing them to conveniently view and manage their accounts electronically. Additionally, customers reported increased satisfaction with faster customer support response times and a higher level of accuracy in their account information following the implementation of the ERP system. The feedback provided by the respondents emphasizes these positive outcomes and their impact on customer satisfaction.
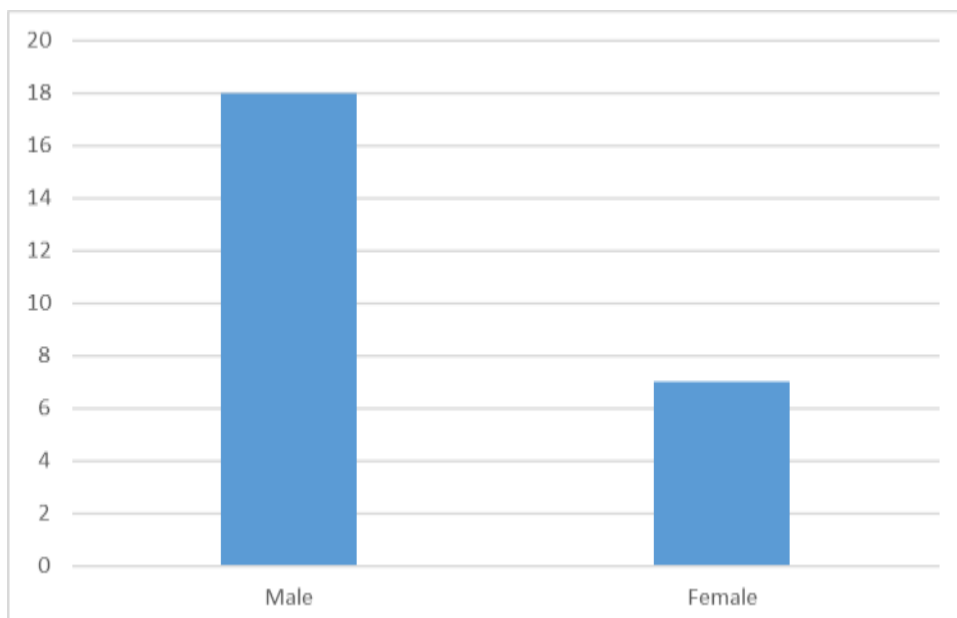
Results of the statistical analysis of the study sample:

The analysis of the survey sample has been visually represented in the following diagrams, depicting the results as follows:
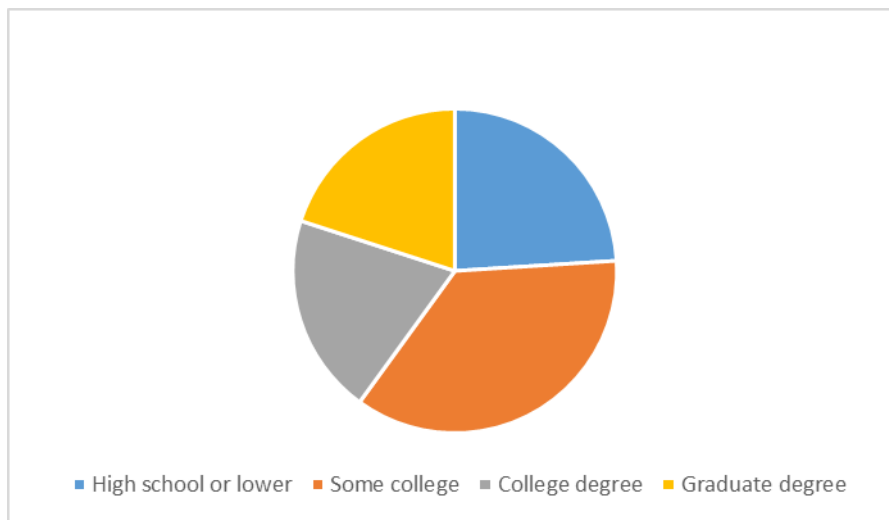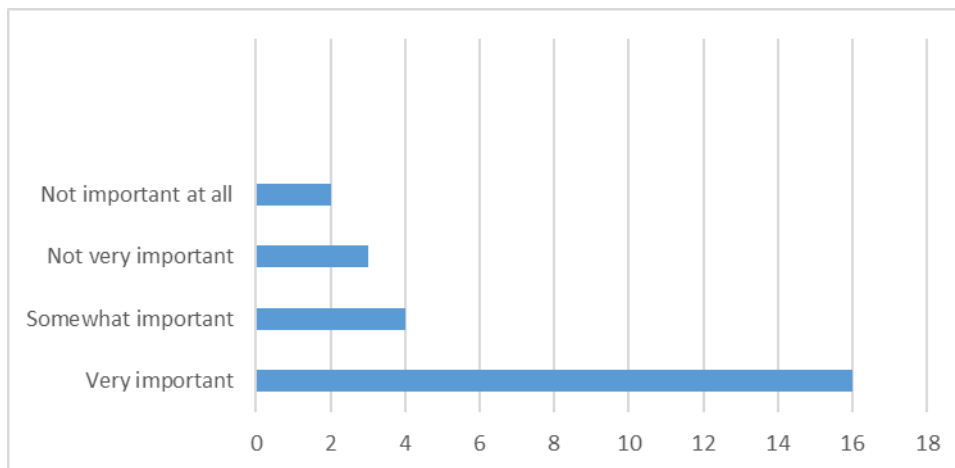
1. **What is your age group?**
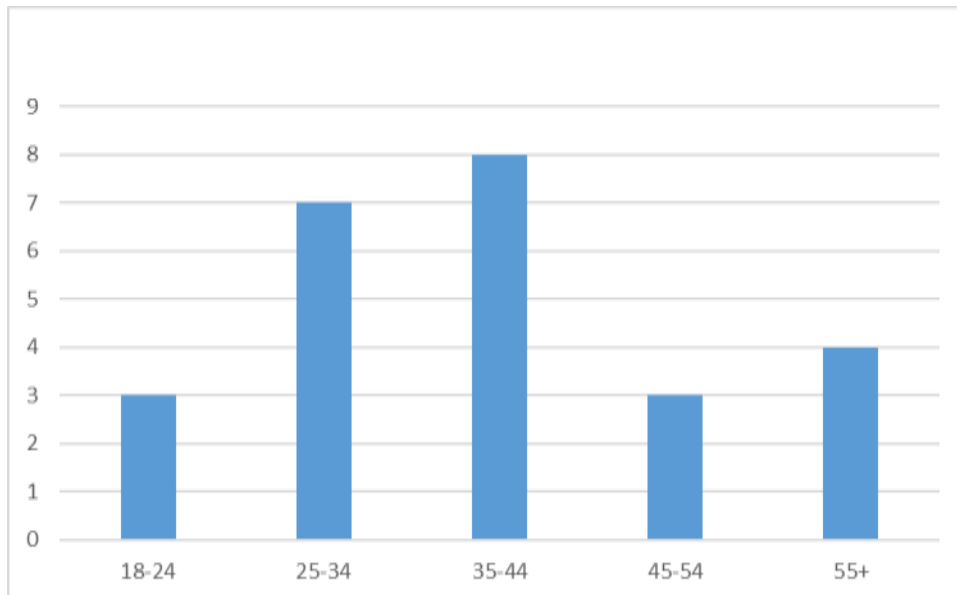
2. **What is your gender?**

3. **What is your highest level of education?**

- High school or lower - Some college - College degree - Graduate degree

4. In your opinion, how important is it for our organization to continuously monitor and test the progress of a cloud-based ERP system?
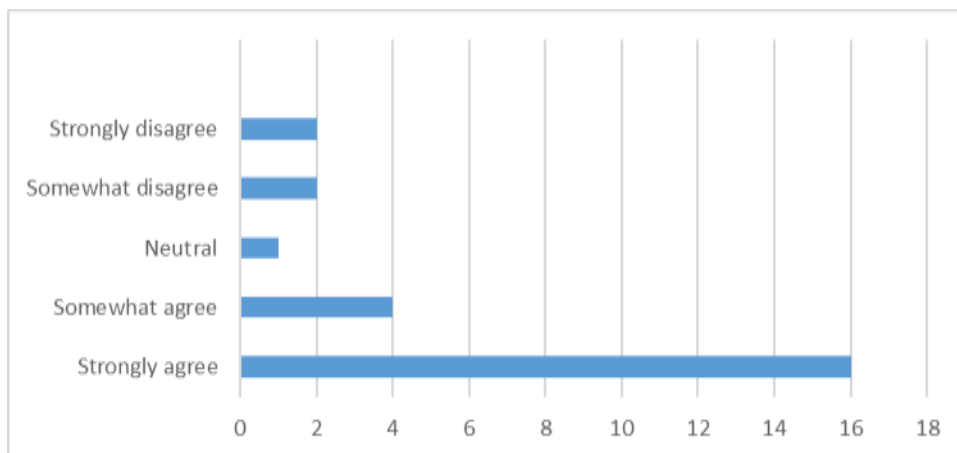

5. Do you believe that implementing a cloud-based ERP system would improve our organization's business processes?


- Strongly agree - Somewhat agree - Neutral
- Somewhat disagree - Strongly disagree -
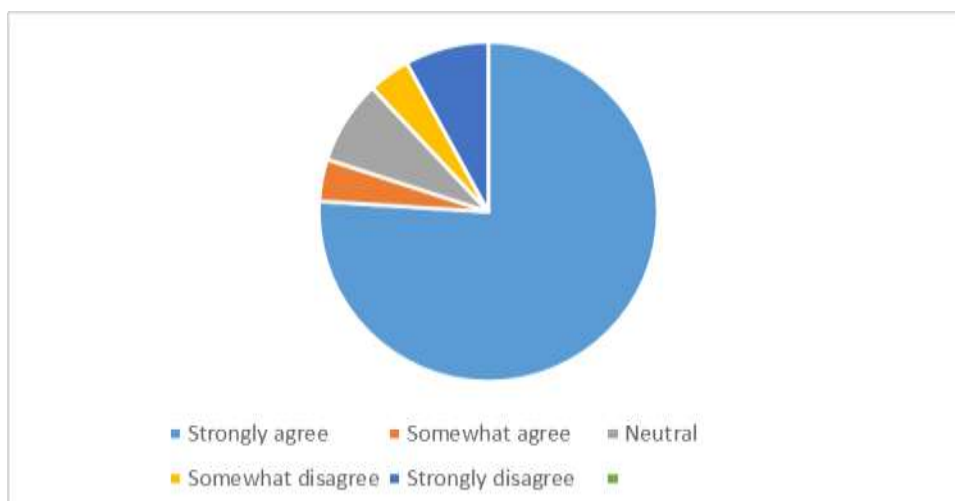
6. **Do you believe that implementing a cloud-based ERP system would improve our organization's production?**
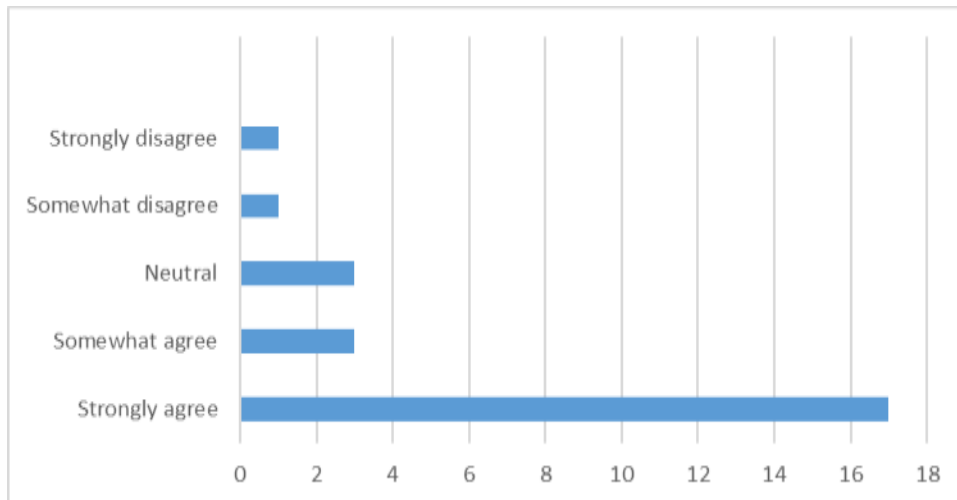
7. **Do you believe that implementing a cloud-based ERP system would improve our organization's customer relations?**

8. **To what extent do you believe that adopting a cloud-based ERP system would improve our organization's competitive advantage in the Saudi market?**
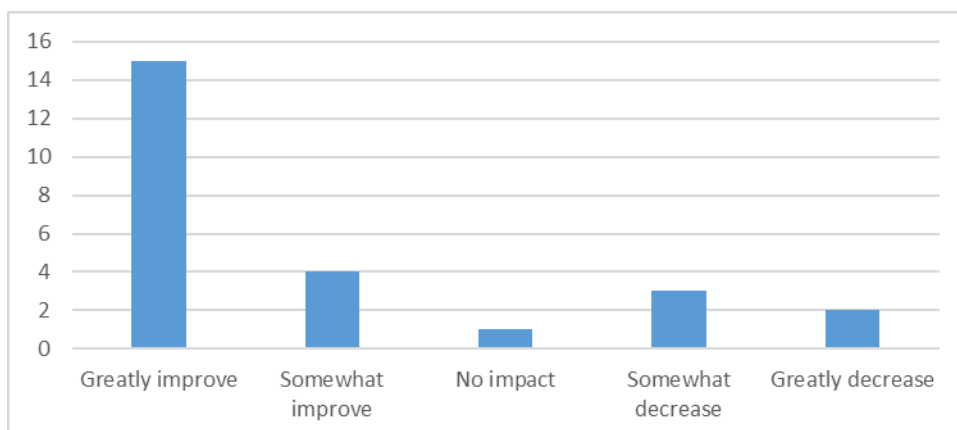
The outcomes reveal that the implementation of Cloud ERP with a focus on customer satisfaction has significantly improved overall operations and performance for MEJDAF. This improvement has led to cost savings, boosting profitability, and enabling MEJDAF to maintain its competitiveness in the Saudi market while gaining a stronger market share.

The evaluation results were validated through the analysis of constructs derived from IDE (Internet Service Evaluation), which encompassed qualitative measures such as customer satisfaction, operational efficiency, and cost savings. This validation process confirmed the successful achievement of the project's goals. Moreover, detailed feedback was obtained through interviews conducted with customers who had implemented the MEJAF Cloud ERP system. This feedback was crucial in interpreting and validating the results obtained from primary and secondary sources during the evaluation.

Additionally, benchmarking analysis was conducted using multiple sources, including financial and qualitative data. This analysis aimed to confirm the alignment of theoretical concepts with practical implementation. The findings obtained through this benchmarking process further supported the success of the Cloud ERP implementation and its positive impact on MEJDAF's operations, financial performance, and market position.

The results and evaluation of this project have yielded a comprehensive understanding of the advantages and limitations of implementing a Cloud ERP system for MEJDAF Trading Group. The evaluation emphasized the positive impact of the Cloud ERP system on various aspects of the business, including operations, customer relations, and production. It also demonstrated the compatibility of the proposed solution with the existing IT infrastructure and provided a benchmarking framework to compare MEJDAF with its competitors in the Saudi market.

Furthermore, the evaluation highlighted the potential cost, time, and effort savings that can be achieved by adopting a Cloud ERP system. It also addressed the importance of implementing robust data protection software to mitigate risks associated with cloud computing technology.

The results obtained from the evaluation process have effectively addressed the research questions and addressed the initial problem identified in Chapter 1. In Chapter 6, the research will be summarized, focusing on the key findings of the study. Additionally, the implications of this technology for organizations considering its adoption will be discussed, and suggestions for future research in this field will be provided.

To improve the information system (IS) between the Saudi government and MEJDAF, it is recommended to focus on providing better services to citizens and increasing system efficiency. This can be achieved through the adoption of cloud-based ERP systems that enhance transparency and enable real-time access to critical information and processes. This would also require the involvement of end-users in the development process through workshops, consultations, and feedback sessions to ensure that the system continues to meet their needs and expectations.

To enhance the security of Saudi Government's data, it is recommended to implement robust data protection software to ensure secure customer transactions. This would involve the implementation of security protocols and encryption technology to safeguard the platform against cyberattacks and other security risks. Disaster recovery and business continuity features should also be incorporated to ensure uninterrupted government operations in the face of catastrophic events.

To strengthen the reliability and integrity of the business relationship between the E-government and MEDJAF, it is recommended to build upon an already well-assessed foundation. This would

involve maintaining close collaboration and communication between the development team, the government, and end-users to address any emerging needs or challenges and ensure the system's ongoing alignment with government processes. Regular evaluations should be conducted to assess the system's performance, impact on efficiency and transparency, and ability to meet government objectives and user needs. Use these evaluations to drive further improvements and enhancements.

9.Conclusion

The evaluation process has provided a comprehensive understanding of MEJDAF Trading Group's operations both before and after the adoption of cloud ERP technology. It has validated the perspectives on customer satisfaction, operational efficiency, competitive edge, and cost savings achieved through the implementation. The carefully designed IT artifact, consisting of a web interface, cloud server, and database, allowed for a positive evaluation of how cloud technology has benefited MEJDAF Trading Group. By improving efficiency and reducing costs over time, the implementation mitigated potential risks and threats to optimal performance. This research has successfully answered the initial question posed in Chapter 1, demonstrating that cloud ERP technology can be successfully implemented in a private business context and holds potential for other similar business experiences within Saudi government institutions.

The project for implementing a cloud ERP system in the Saudi Arabian e-government system has been a successful endeavor. The new IT artifact was developed with the goal of enhancing the efficiency and transparency of government operations and processes. The project followed a comprehensive approach that involved close collaboration between the development team, the government, and the end-users.

The development team utilized cutting-edge cloud-based technologies to ensure the scalability, security, and reliability of the system. The platform was designed to provide real-time access to critical information and processes, enabling the government to respond promptly and efficiently to citizen needs. The user-friendly design made it accessible from any device with an internet connection, ensuring flexibility and convenience for users.

The involvement of end-users in the development process played a crucial role in the project's success. Regular user workshops and consultations helped the development team understand user needs and requirements, resulting in a platform that met user expectations.

Security was given paramount importance during the project. The development team implemented robust security protocols and encryption technology to safeguard the platform against cyberattacks and other security risks. Disaster recovery and business continuity features were also incorporated to ensure uninterrupted government operations in the face of catastrophic events.

The risks associated with the implementation were effectively addressed through a comprehensive risk management plan. Key risks were identified, and mitigation measures were put in place, including contingency plans to ensure system continuity in the event of component failure.

The project was successfully implemented, and the system was adopted by the government and its users. The platform's single point of access to critical information and processes significantly improved government efficiency and transparency. Real-time information access enabled timely and effective responses to citizen needs.

The platform received positive feedback from end-users, who appreciated its user-friendly

design and easy access to the required information and processes. The administration also acknowledged the improved efficiency and transparency resulting from the implementation of the system.

10.Recommendations:

Based on the evaluation process and the successful implementation of the cloud ERP system in MEJDAF Trading Group and the Saudi Arabian e-government system, the following recommendations can be made:

1. Continuous Improvement: Maintain a focus on continuous improvement by regularly gathering feedback from end-users and conducting evaluations to identify areas for enhancement and optimization.

2. User-Centric Approach: Continue involving end-users in the development process through workshops, consultations, and feedback sessions to ensure that the system continues to meet their needs and expectations.

3. Security Measures: Sustain and enhance the robust security protocols and encryption technology implemented to safeguard the platform against cyber-attacks and other security risks. Regularly update and assess security measures to stay ahead of potential threats.

4. Disaster Recovery and Business Continuity: Regularly review and update disaster recovery and business continuity plan to ensure the system's ability to maintain operations and provide uninterrupted services during unforeseen events or system failures.

5. Scalability and Reliability: Monitor the scalability and reliability of the system as user demands and requirements evolve over time. Regularly assess and upgrade the infrastructure to ensure optimal performance and a seamless user experience.

6. Collaboration and Communication: Maintain close collaboration and communication between the development team, the government, and end-users to address any emerging needs or challenges and ensure the system's ongoing alignment with government processes.

7. Training and Support: Provide comprehensive training and support to end-users to ensure their effective utilization of the system and to address any issues or concerns they may encounter.

8. Regular System Evaluation: Conduct periodic evaluations to assess the system's performance, its impact on efficiency and transparency, and its ability to meet government objectives and user needs. Use these evaluations to drive further improvements and enhancements.

9. Knowledge Sharing: Share the success and lessons learned from the implementation of the cloud ERP system with other government institutions in Saudi Arabia to promote the adoption of similar technologies and further enhance government operations.

10. Stay updated with technological advancements: Continuously monitor and explore new technologies and advancements in the field of cloud ERP systems to identify opportunities for further optimization and innovation in MEJDAF's operations.

11.Limitations of Implementing a Cloud ERP System and the study direction

Technical challenges arise during the integration process, as existing systems and processes may be incompatible with the cloud ERP system. This can result in difficulties with data transfer and integration, while security and privacy concerns must be addressed to protect sensitive information stored in the cloud. Robust security measures, including encryption, access control,

and backups, are necessary to safeguard data from cyberattacks.

Resistance to change from employees and departments poses another limitation. Government employees may be resistant to adopting new software and unfamiliar with cloud ERP systems. Overcoming this limitation requires providing adequate training and support to ensure employees can effectively utilize the system. Involving employees in the implementation process can foster engagement and encourage feedback for continuous improvement.

High implementation costs are another consideration. Government organizations may face significant expenses related to software development, infrastructure upgrades, and training and support for employees. It is important to carefully evaluate the costs versus benefits and consider a phased approach to implementation to minimize costs and manage risks effectively.

The lack of skilled personnel can also be a limitation. Implementing a cloud ERP system requires expertise in the software and integration with existing systems. Government organizations may face challenges if they lack in-house personnel with the necessary skills, leading to delays and increased costs. Addressing this limitation may involve hiring external consultants or investing in training and development programs to ensure employees acquire the required skills and knowledge.

The complexity of the ERP system itself is another limitation. Cloud ERP systems are intricate pieces of software that require specialized knowledge and skills for effective use. The government may encounter difficulties in understanding and utilizing the system, which can impede the implementation process. To overcome this limitation, it is essential to ensure that the cloud ERP system is user-friendly and provide comprehensive training and support to employees.

While the MEDJAF project showcased the benefits of implementing a cloud ERP system for efficiency and security in e-government services, it is crucial to acknowledge and address these limitations for a successful implementation and optimal utilization of the system.

12.The Study Directions:

1. Integration Strategies: Investigate effective methodologies for seamless integration of cloud ERP systems with existing processes and systems, addressing technical challenges and data transfer compatibility.

2. User Adoption and Change Management: Explore strategies to manage resistance to change among employees during the implementation of cloud ERP systems, including comprehensive training programs and employee engagement initiatives.

3. Skilled Workforce Development: Research effective training programs and partnerships with educational institutions to address the shortage of skilled personnel for implementing cloud ERP systems.

4. Security and Privacy Enhancements: Explore advanced security measures, privacy-enhancing techniques, and emerging technologies to strengthen data security and protect sensitive information.

5. Case Studies and Best Practices: Conduct comprehensive case studies to identify best practices and success factors for implementing cloud ERP systems in organizations.

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