The Role of Smart Applications in Achieving the Goals of Vision 2030 of the Kingdom of Saudi Arabia

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Abstract

This study explores the role of smart applications in achieving the goals of Vision 2030 in Saudi Arabia. The research specifically examines the current use of smart applications, their contribution to Vision 2030, and the obstacles hindering their full implementation. A descriptive analytical approach was employed, using a questionnaire distributed to a random sample of 111 respondents from government, private, and military sectors. The study found a high level of agreement (mean = 3.87) on the effective use of smart applications, with organizations utilizing them to deliver services and engage positively with users. Moreover, smart applications were seen as crucial in meeting Vision 2030's objectives (mean = 4.01) by enhancing service efficiency, improving the work environment, and increasing beneficiary satisfaction while reducing errors and complaints. Key barriers identified included weak data protection systems, insufficient training in smart application management, and limited Arabization of foreign systems (mean = 3.76). No statistically significant differences were found regarding age, education, or sector of employment. Based on these findings, the study recommends expanding training programs, enhancing security measures, and promoting Arabization to strengthen confidence in smart applications.

Key words*: Smart Applications, Vision 2030, Digital Transformation, Technology.*

1. INTRODUCTION

Technology has become a fundamental part of our daily lives, offering tools and innovations that make it easier to perform tasks and access information (Ismail, 2018). With the widespread use of mobile phones and the rise of mobile applications, these technologies have significantly influenced how we live and interact (Sleem, 2011). The rapid development of smartphones and tablets has led to the creation of smart applications, which are now essential in many areas, including education, healthcare, security, and

communication (Saleh, 2017). As businesses embrace digital transformation, they are increasingly turning to smart applications to boost their efficiency and better serve their customers, reflecting the characteristics of modern 21st-century organizations (Ismail, 2018). These applications are especially valuable in e-government services, where they streamline processes like transactions, communication, and service access (Alabd, 2017). However, companies that overlook the importance of smart applications risk falling behind in the competitive market (Onis & Bin Amara, 2019).

Saudi Vision 2030 is an ambitious blueprint launched by the Kingdom of Saudi Arabia to diversify its economy and reduce its dependence on oil incomes. The vision is built around three primary themes: a vibrant society, a thriving economy, and an ambitious nation. Key goals include promoting Islamic values and national identity, enhancing cultural and entertainment opportunities, increasing the number of religious visitors, improving healthcare services, reducing unemployment rates, increasing women's participation in the workforce, boosting foreign direct investment, supporting small and medium-sized enterprises, and enhancing government efficiency and transparency (Vision 2030, 2016). Saudi Arabia has been a leader in adopting and developing smart applications, recognizing their potential to improve service delivery in line with its Vision 2030 goals. This vision highlights the importance of technology in driving economic growth and improving the quality of services provided to citizens and residents. Both the public and private sectors are encouraged to leverage smart applications to enhance service accessibility and efficiency (Vision 2030, 2016). Smart technologies are essential in realizing Saudi Arabia's Vision 2030, serving as the spine for economic diversification and modernization efforts. The integration of advanced technologies such as artificial intelligence (AI), the Internet of Things (IoT), and cloud computing is contributory in enhancing productivity, fostering innovation, and driving sustainable growth across various sectors. Initiatives like NEOM, a futuristic smart city, exemplify the Kingdom's commitment to leveraging technology for urban development and environmental sustainability. A recent published studies focus on the role of digitalization and new technology to achieve the 2030 Saudi vision goals, like Nadia Yusuf et al. (Yusuf, 2023) when he discussed the role of digital transformation, including the adoption of artificial intelligence and machine learning, in implementing Vision 2030 initiatives. Furthermore, the study of Mohammed Abdulfasi (Abdulfasi, 2024) analyzed patent data to assess technological advancement and innovation in Saudi Arabia post-Vision 2030, highlighting the nation's progress toward a knowledge-based economy.

In light of the increasing progress in the use of modern technology and entering strongly in the era of digital transformation in the Kingdom of Saudi Arabia, the use of smart applications in Saudi institutions has become a requirement and an indispensable necessity in government and private institutions because of its positive results towards improving performance, raising competencies and achieving competitiveness and profit (Saleh, 2017; Alabed, 2017). This is supported by Alsalmi and Seleti (2008) who reported that it is necessary to rely on a clear strategy that starts from studying reality and its problems before moving to the digital environment. Also, a study by Alkhenefer (2018) revealed the existence of obstacles hindering the implementation of smart electronic management in the Saudi government environment which include administrative, human, cultural, social, organizational, structural, technical and environmental obstacles. Furthermore, Alharbi (2015) pointed out that the application of modern technologies in Saudi universities faces difficulties represented in the employees' reluctance of new technologies, the absence of employee training on technologies, the lack of technical support programs and insufficient financial allocations for technologies.

Despite the importance of smart applications, there are some difficulties and obstacles that may limit the optimal utilization of them, especially in light of the Kingdom's Vision 2030 that is heavily dependent on the use of digital technology in order to be able to provide its services with the highest degree of efficiency and quality. Therefore, the problem statement of our study is represented in

following main question: *What is the role of smart applications in achieving the goals of the Kingdom's Vision 2030?*
From this main question, the following sub-questions are raised:

1. What is the reality of using smart applications in achieving the goals of the Kingdom's Vision 2030 from the participants' point of view?
2. How do smart applications contribute to achieving the goals of the Kingdom's Vision 2030 from the participants' point of view?
3. What are the obstacles that limit the use of smart applications to achieve the goals of the Kingdom's Vision 2030 from the participants' point of view?

2. Literature Review

Smart applications have been defined in various ways, focusing primarily on their digital and software features. Guthery and Cronin (2001, p. 22) describe smart applications as those that integrate data-driven ideas and practical procedures into user experiences, streamlining task execution. Kumar (2018) adds that these are smartphone-based programs that rely on network connectivity to deliver specific services. Similarly, Theimer (2014, p. 8) defines smart applications as computer programs designed exclusively for smart mobile devices, easily accessible through app stores. Modern smart applications, integral to advanced mobile devices with operating systems like Android and iOS, have become crucial for enhancing organizational efficiency and competitiveness (Mandl et al., 2012, p. 598). They improve productivity, enable better decision-making, and allow organizations to address complex issues effectively, thus maintaining product quality and profitability (Kuss et al., 2012). Institutions also use these applications to reach a broader audience, strengthening their brand presence (Theimer, 2015).

In Saudi Arabia, Vision 2030 serves as a strategic framework for economic and developmental progress. This initiative aims to position the Kingdom as a global leader in information and communications technology, focusing on digital transformation and IT industry development (National Transformation Program, 2020). Vision 2030 also emphasizes the modernization of ICT infrastructure and regulatory frameworks to foster innovation and support entrepreneurs and digital talent (Vision 2030). Numerous studies have explored the role and importance of smart applications in various contexts. For instance, Mohamed (2019) examined the design of smartphone and tablet applications for accessing news sites, finding that users appreciated features like ease of learning and efficiency, though they were less satisfied with cognitive load and error-making. Al-Nimuri (2018) analyzed the use of smartphone applications in Arab university libraries, noting that while adoption rates are low, the potential for these applications remains underutilized. Zahr (2018) compared the use of smart applications in Lebanese academic libraries, revealing that only half of the universities studied offered services through mobile apps.

Other studies, such as Al-Attab (2018), highlighted the importance of training library staff to use smartphone applications effectively. Alshamari (2018) emphasized the strategic role of mobile applications in improving the quality of technical and vocational education in Saudi Arabia, while Fotiou (2017) discussed how mobile apps like NeverLost can enhance the quality of life for citizens. Al-Qarni (2014) found that the lack of training and awareness hinders the use of mobile technology in Saudi university libraries. Based on the literature, this study appears to be the first to specifically examine the role of smart applications in achieving the goals of Vision 2030 in Saudi Arabia. This research aims to fill an academic gap by exploring a previously unstudied topic, using insights from past studies to formulate research questions and methodology.

3. Methodology

3.1. Research Approach

The researcher used the descriptive analytical approach in order to achieve the objectives of the current study and answer the research questions. The descriptive approach is based on "identifying the characteristics of the phenomenon, describing its nature and the quality of the relationship between its variables, its causes, trends, and so forth. It revolves around probing the depths of a specific problem or phenomenon and identifying its reality" (Morsi, 2005, P. 96).

3.2. Research Population and Sample

The study population consists of all employees working (upper and middle management level) in governmental agencies and private and military sector institutions in all regions of the Kingdom of Saudi Arabia. This study was conducted during the second semester of the academic year 1440-1441 H (2019-2020). The research sample in the current study consisted of a random sample of senior and middle management employees in the aforementioned agencies.

3.3. Data Collection Tools

The researcher used the questionnaire tool to achieve the goals of the research and answer the research questions. The questionnaire was prepared based on previous studies and research literature that discussed the role of smart applications in achieving the Kingdom's Vision 2030. A Likert five-point scale was adopted to respond to the questions of the questionnaire. The questionnaire was distributed to the research sample electronically. The number of participants who responded to the questionnaire was (111) participants. The distribution of the study sample according to the job variable was as follows: General Manager (3.6%), Department Manager or Head of Department (16.2%), Department Supervisor (27.9%), administrative employee (24.3%), academic (14.4%) and technician (13.5%). The distribution of the study sample according to the variable of the institution's field of work was as follows: the industrial sector (8.1%), the services sector (36.9%), which is the largest part of the study sample, the education sector (16.2%), the health sector (13.5%), and the military sector (25.2%).

3.4. Validity and Reliability of the Questionnaire

The validity of the questionnaire means that the questionnaire measures what is designed to measure. The researcher has verified the validity of the questionnaire by using the validity of the arbitrators. The researcher measures the reliability of the questionnaire via Alpha Cronbach parameter. For the three sections of the studied questionnaire the Alpha Cronbach parameter achieves 0.654, 0.755 and 0.874 respectively. This confirms that the results gathered from the questionnaire are reliable.

3.5. Statistical Treatment Tools

Statistical treatment of the data collected through the questionnaire was made using the Statistical Package for Social Sciences (SPSS) software. The following statistical tools were used: *frequency* and *percentage*, *mean score* and *standard deviations*, *Alpha Cronbach's test* to check the reliability of the questionnaire, the *relative weight* to measure the percentage of representation of each item in the questionnaire, and *Chi Square* χ^2 *test* to illustrate the statistically significant differences between the responses.

4. Results and Discussion

4.1. The Participants' Demographics

Below are the results of the demographics and job variables of the research participants:

A- Job titles

The distribution of the participants according to job is as follows: general manager (3.6%), department manager or division head (16.2%), department supervisor (27.9%), administrative employee (24.3%), academic (14.4%) and technician (13.5%).

B- The Work Field of Institution

The distribution of the participants according to the work field of your institution is as follows: the industrial sector (8.1%), the services sector (36.9%), the education sector (16.2%), the health sector (13.5%), and the military sector (25.2%).

C- The Institution Size (Number of Employees)

The distribution of the participants according to the institution size is as follows: less than 50 employees (12.6%), more than 50 employees to less than 100 employees (10.8%), more than 100 employees to less than 500 employees (20.7%), more than 500 employees to less than 1,000 employees (10.8%) and more than 1,000 employees (45%).

D- Does Your Institution Have Smart Applications to Provide Services to the Beneficiaries?

The distribution of the participants according to the presence of smart applications in the institution is as follows: yes (61.3%), no (27.9%), I don't know (10.8%), meaning that most organizations have smart applications.

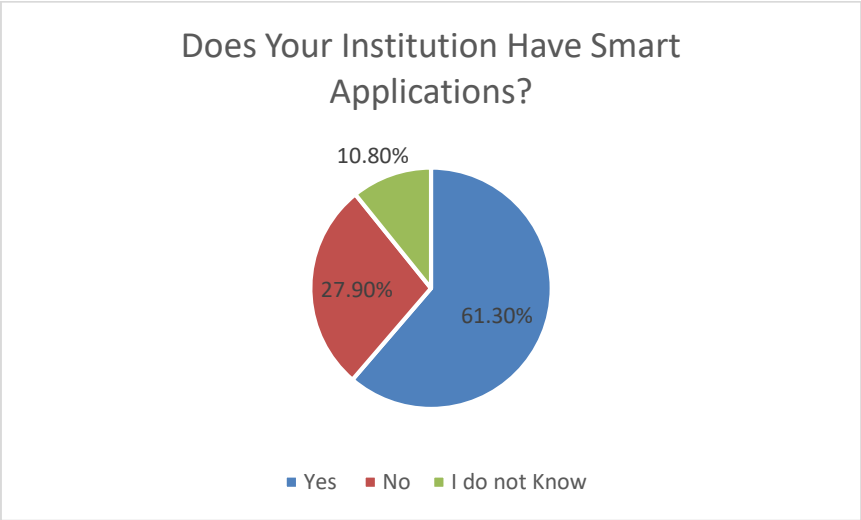

Figure 1. Results of the Presence of Smart Applications in the Institution.

4.2. Results of the First Section of the Questionnaire

In order to analyse the statements of the first section of the questionnaire, the mean, relative weight and Chi Square are used in order to analyze the responses of the participants to this section. Table 1 shows the findings of this section.

Table 1. The Results of the First Section of the Questionnaire (The Reality of Using Smart Applications in Achieving the Goals of Vision 2030).

Statements	Mean	Relative Weight	Chi Square $\chi 2$	Degree of Agreement	Rank
Your employer uses smart apps to provide services to beneficiaries.	4.23	77.23	6.020	Very High	1
There is a positive interaction with smart applications for the services provided by your employer.	4.18	77.44	3.547	High	2
Your employer depends mainly on smart applications to provide its programs and services.	3.67	74.23	13.683	High	11
Your employer's smart applications cover all services needed by beneficiaries.	3.65	74.23	21.658	High	12
The number of smart applications in your institution is increasing and there is a diversity of applications provided to beneficiaries.	3.73	70.36	11.989	High	9
Your activities and services are designed to be based on smart applications instead of traditional methods.	3.71	74.23	13.683	High	10
Financial support is available to create and develop smart applications in your institution.	3.91	74.23	21.658	High	4
There are experts in your work place to design smart applications according to international and local standards.	3.85	67.02	9.008	High	6
You have the qualified human cadres to manage smart applications.	4.09	77.22	6.021	High	3
Your senior management supports the use of smart applications at work.	3.89	77.24	3.547	High	5
The senior management employs consulting agencies to provide advice in the field of smart applications.	3.76	73.33	0.069	High	8
Your institution has a special section for managing smart applications or electronic services.	3.79	74.11	3.594	High	7
Total Mean of the Section	3.87				

Table 1 shows the response to (the reality of using smart applications in achieving the goals of Vision 2030). In general, the mean score for all items is (3.87) and this means that the respondents highly agree to the items of this section. Figure 2 below shows the results of this section:

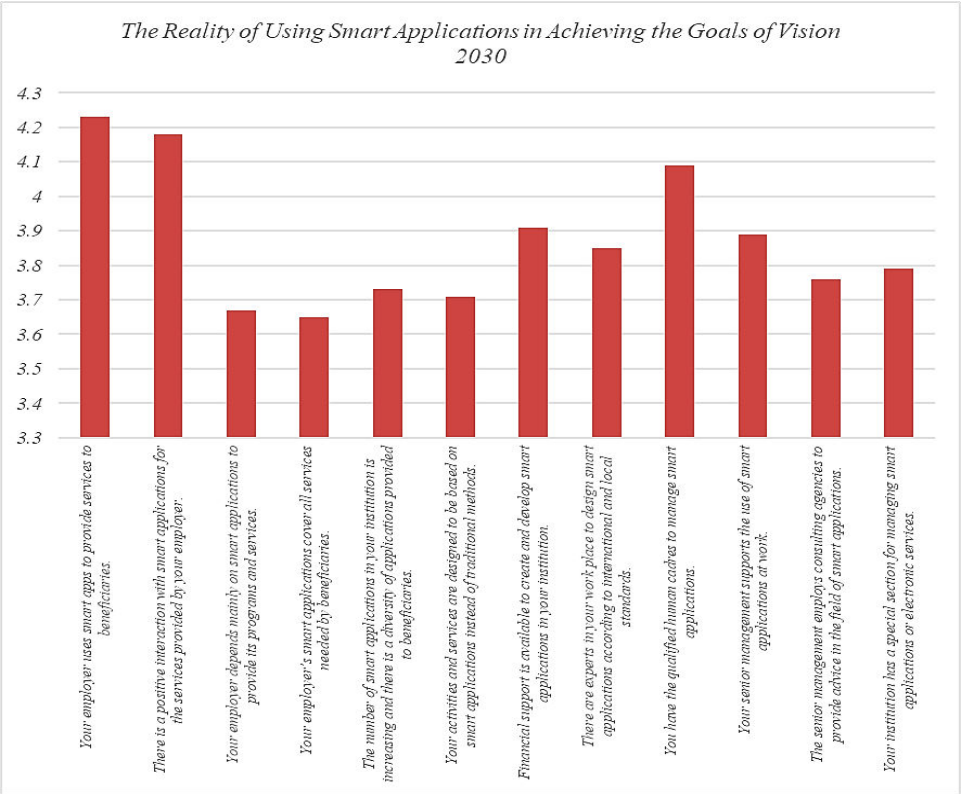

Figure 2. Results of Section One - The Reality of Using Smart Applications in Achieving the Goals of Vision 2030.

The above findings showed show the institution in which the participants work uses smart applications to provide services to beneficiaries and that there is a positive interaction with special smart applications. The results also show that the employer depends mainly on smart applications to provide its programs and services. On the other hand, the participants showed their agreement that the smart applications are increasing and there is a diversity in the applications provided to the beneficiaries and that their activities and services are designed to be based on the smart applications instead of the traditional methods. These results are consistent with the results of the studies of Al-Sawy (2019) and Muhammad (2019) that smart applications have become major tools for organizations to provide their services and access to the market quickly and accurately. The results of this study are also consistent with those of Badii et al (2019) who reported that consumers are more likely to use smart applications than traditional methods when requesting services. On the other hand, the respondents agreed with the availability of financial support for the establishment and development of smart applications and that their institution has experts in designing these applications and the qualified human cadres are available to manage smart applications with the support of senior management. The participants expressed their approval that the senior management uses the consulting agencies to provide advice in the field of smart applications and that they have a special department to manage smart applications or electronic services. The results of this study are consistent with the results of the Al-Qarni (2014) in emphasizing the support of senior management for the implementation of electronic services and with Saadani (2015) who confirmed that the financial and advisory support represents cornerstone in the success of the application smart services. The results of this study are also consistent with the goals of Vision 2030 that rest upon

smart applications to provide services to the beneficiaries stress on diversity in order to reduce the interference of the human element.

4.3. Results of the Second Section of the Questionnaire

In order to analyse the statements of the second section of the questionnaire, the mean, relative weight and Chi Square are used in order to analyze the responses of the participants to this section. Table 2 shows the findings of this section.

Table 2. The Results of the Second Section of the Questionnaire (The Role of Smart Applications in Achieving the Goals of Vision 2030).

Statements	Mean	Relative Weight	Chi Square $\chi 2$	Degree of Agreement	Rank
Smart applications contribute to achieving the quality of life for the beneficiaries.	4.32	77.23	6.020	Very High	3
Smart applications contribute to achieving the national transformation program.	4.06	78.23	16.391	High	8
Smart applications contribute to increasing competitiveness and raising the level of service.	4.16	76.98	6.050	High	6
Smart applications improve the working environment.	4.23	77.11	9.501	Very High	5
Smart applications contribute to raising the level of skills and abilities of human resources working on it.	4.02	70.36	11.989	High	9
The use of smart applications speeds up work and service.	4.41	74.11	11.354	Very High	1
Smart applications contribute to increasing the beneficiaries' satisfaction of the provided services.	4.08	77.23	6.020	High	7
Smart applications reduce beneficiaries' complaints.	3.48	71.66	16.861	High	14
Smart applications contribute to easy access to the service anytime and anywhere.	4.38	77.44	2.327	Very High	2
Smart applications help services reach all categories of beneficiaries without discrimination.	3.42	74.23	13.683	High	15
Smart applications reduce operating costs.	4.29	67.02	9.008	Very High	4
Smart applications help reduce errors and increase accuracy rates.	3.91	77.23	6.020	High	10
Smart apps increase integrity and transparency.	3.81	77.44	3.547	High	12
Smart applications contribute to raising local content, diversifying the economy and developing companies.	3.75	74.23	13.683	High	13
Smart applications contribute to the development of national industries and logistics.	3.89	74.23	13.683	High	11
Total Mean of the Section	4.01				

Table 2 shows the response to (the role of smart applications in achieving the goals of Vision 2030). In general, the mean score for all items is (4.01) and this means that the respondents very highly agree to the items of this section. Figure 3 below shows the results of this section:

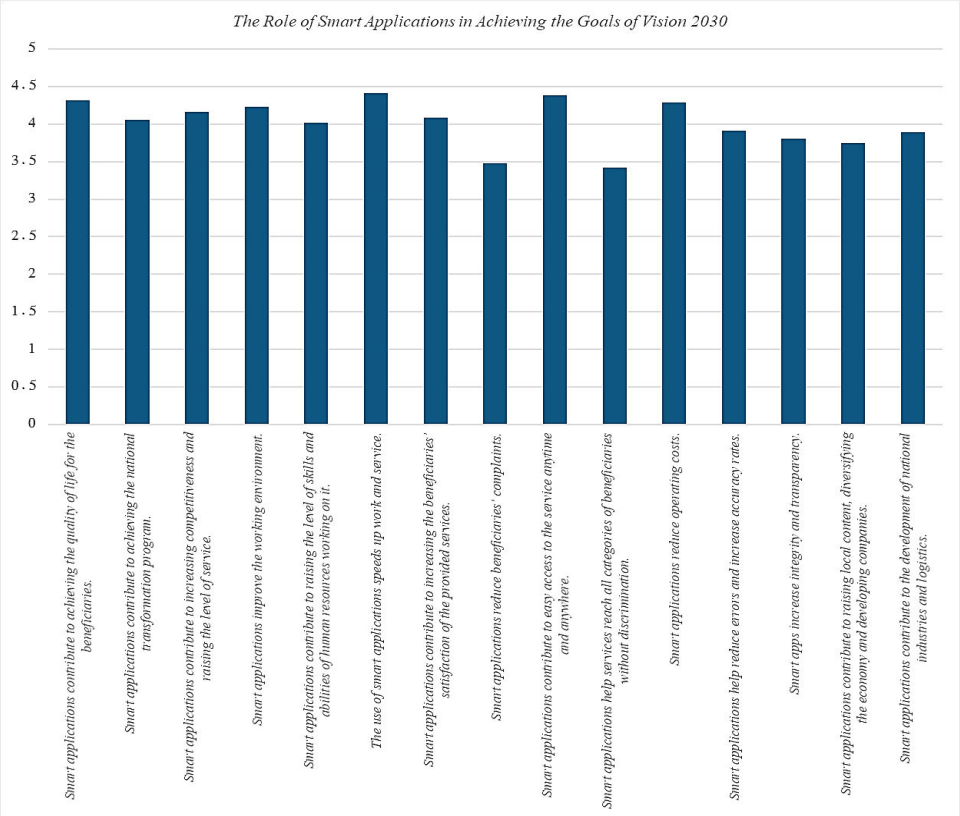

Figure 3. Results of Section Two. The Role of Smart Applications in Achieving the Goals of Vision 2030.

The above studies indicate that smart applications have an important and prominent role in achieving the goals of the Vision 2030 in the Kingdom of Saudi Arabia. From the previous results, the role of smart applications is represented in the speed of completion of work and obtaining the service, the ease of obtaining the service at any time and place, achieving the quality of life for the beneficiaries, reducing operational costs, improving the work environment, increasing competitiveness and raising the level of service and increasing the satisfaction of the beneficiaries of the services provided. The results of this study are consistent with the results of Al-Khunaifer (2017) and Al-Harbi (2015) who emphasized the role of smart applications in providing services quickly and achieving high levels of customers' satisfaction.

The respondents also agreed with the role of smart applications in achieving the national transformation program, raising the level of skills and capabilities of human resources working on them, reducing the rate of errors and increasing rates of accuracy in performance, developing national

industries and logistics services, increasing rates of integrity and transparency, raising local content, diversifying the economy and developing companies and reduce the complaints of beneficiaries and access of services to all beneficiaries. These results are consistent with the goals of Vision 2030 since 80% of Vision 2030 depends on smart applications through the direction of the public and private sectors to benefit from them and that the Kingdom is witnessing a significant digital transformation in the governmental sector.

4.4. Results of the Third Section of the Questionnaire

In order to analyse the statements of the third section of the questionnaire, the mean, relative weight and Chi Square are used in order to analyze the responses of the participants to this section. Table 3 shows the findings of this section.

Table 3. The Results of the Third Section of the Questionnaire (The Obstacles that Limit the Use of Smart Applications in Achieving the Goals of Vision 2030).

Statements	Mean	Relative Weight	Chi Square $\chi 2$	Degree of Agreement	Rank
Weak data protection systems.	4.22	74.23	**21.658	Very High	1
Inability to handle smart applications well.	2.61	67.02	9.008	Intermediate	10
Lack of continuous monitoring of business progress electronically.	4.03	77.22	6.021	High	5
The rapid development of smart applications.	4.19	77.24	3.547	High	3
Weak Arabization of foreign systems and programs.	4.01	73.33	**0.069	High	6
Lack of accurate and integrated databases.	4.08	74.11	**3.594	High	4
The difficulty of electronic linking between departments.	3.89	74.11	*11.354	High	7
The high financial cost for designing and developing applications.	3.81	77.23	6.020	High	8
Decreased beneficiaries 'confidence in transactions via smart applications.	2.58	71.66	*16.861	Intermediate	9
Lack of training programs in smart application management.	4.20	76.23	6.019	High	2
Total Mean of the Section	3.76				

Table 3 shows the response to (the obstacles that limit the use of smart applications in achieving the goals of Vision 2030). In general, the mean score for all items is (3.76) and this means that the respondents highly agree to the items of this section. The above findings show that the most prominent obstacles that limit the use of smart applications in achieving the goals of Vision 2030 are the weakness of data protection systems, the lack of training programs in the management of smart applications, the rapid development of smart applications, the absence of accurate and integrated databases, lack of continuous monitoring of the workflow electronically, weak Arabization of foreign systems and programs, the difficulty of electronic linking between departments and the high financial cost of

designing and developing applications. These results are similar to the results of the Al-Harbi (2015) and Al-Khanifir (2017) which emphasized that the lack of information protection system, the absence of training programs and follow-up systems are among the most prominent obstacles to making optimal use of modern electronic applications. These results are also consistent with the results of the Hmeid (2017) who stressed that the weak qualification of human cadres and Arabization systems represent a major challenge to expand in modern applications. Figure 4 below shows the results of this section.

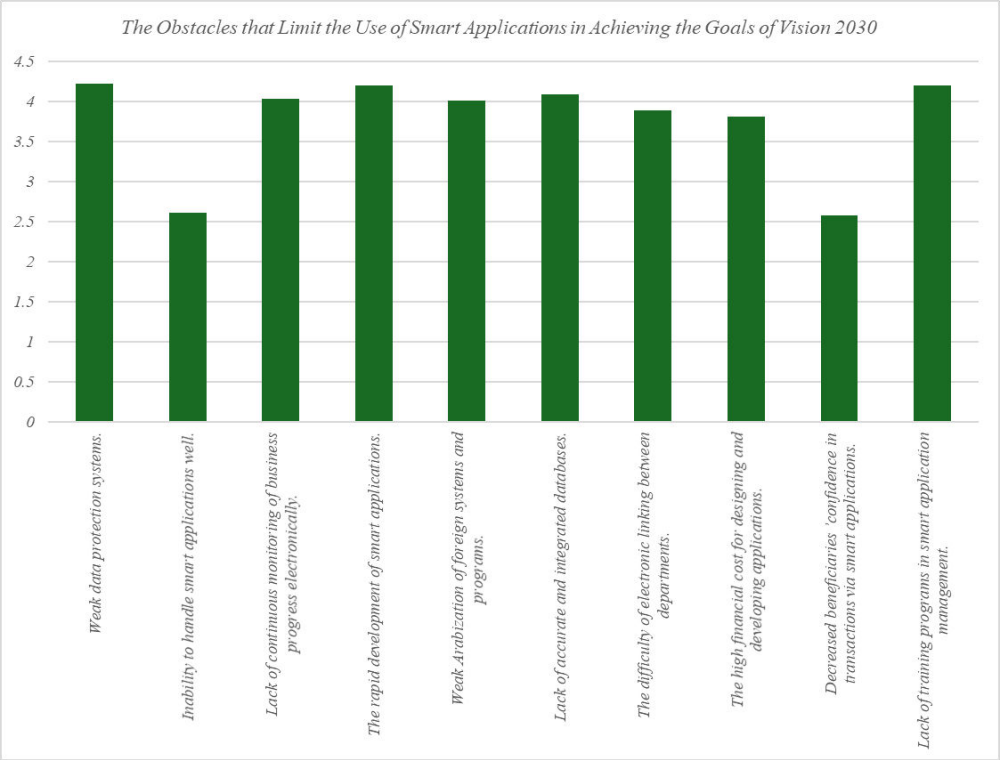

Figure 4. Results of Section Three. The Obstacles that Limit the Use of Smart Applications in Achieving the Goals of Vision 2030.

On the other hand, the least reported obstacles from the point of view of the participants are the inability to deal with smart applications well and low beneficiaries' confidence in transactions via smart applications. The results of this study are consistent with Al-Harthi (2008) and Onis and Bin Amara (2019) who concluded that some still fear modern applications and that there are those who still prefer the traditional methods of obtaining the service as a kind of non-risk. The Vision 2030 called for the strengthening of electronic and digital governance systems in order to protect the rights of beneficiaries and enhance the property rights of owners which in turn creates confidence in smart applications and contributes to its development and spread.

4.5. Study of the statistically significant differences between the viewpoints of the study sample

To find out whether there were statistically significant differences between the viewpoints of the study sample towards the study axes according to the participant work sector's variables (industrial or service sector), a one-way analysis of variance (ANOVA) was used, as shown in table 4. It is clear from the results shown table 4, that there are no statistically significant differences at the level of 0.05 or less in the answers of the study sample regarding (the reality of using smart applications in achieving the goals of Vision 2030 - the role of smart applications in achieving the goals of Vision 2030 - the obstacles that limit the use of smart applications in achieving the goals of Vision 2030) according to the variable of the institution's field of work.

Table 4. Results of One-Way ANOVA for Differences in the Mean Responses of the Study Sample According to the Variable of the Institution Work sectors'

Section	Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F -Value	P- Value
The reality of using smart applications in achieving the goals of Vision 2030	Between Groups	1.115	2	0.37	0.71	0.54
	Within Groups	117.03	64	0.52		
	Total	118.14	66	-		
The role of smart applications in achieving the goals of Vision 2030	Between Groups	0.55	2	0.18	0.61	0.61
	Within Groups	67.31	64	0.3		
	Total	67.86	66	-		
The obstacles that limit the use of smart applications in achieving the goals of Vision 2030	Between Groups	1.06	2	0.35	0.54	0.65
	Within Groups	147.06	64	0.65		
	Total	148.13	66	-		

5. Conclusion

Throughout the discussion and analysis the data indicates that the participating organizations heavily rely on smart applications to deliver services to beneficiaries, reflecting a significant shift from traditional methods. The respondents highlighted an increase in the diversity and prevalence of smart applications, underscoring their central role in service provision and program delivery. Also it stand out that smart applications are pivotal in advancing the objectives of Vision 2030 in the Kingdom of Saudi Arabia. They facilitate expedited service delivery, enhance accessibility, improve the quality of life for

beneficiaries, reduce operational costs, and foster a competitive environment. Additionally, these applications are instrumental in elevating service quality and boosting customer satisfaction. However the study identifies several obstacles that hinder the effective utilization of smart applications in achieving Vision 2030 goals. These challenges include inadequate data protection systems, insufficient training on smart application management, the rapid evolution of technology, lack of integrated databases, limited electronic workflow control, insufficient Arabization of foreign systems, difficulties in inter-departmental electronic integration, and high costs associated with application development.
Based on the above results, the following key takeout can be formulated:

1. Our previous results indicated that the employer in which the participants work uses smart applications to provide their services to beneficiaries and that there is a positive interaction with special smart applications. The results also showed that the employer depends mainly on smart applications to provide its programs and services. On the other hand, the respondents agreed that smart applications are increasing and there is a diversity in the applications provided to beneficiaries and that activities and services have are designed to be based on smart applications instead of traditional methods.
2. Smart applications have an important and prominent role in achieving the goals of Vision 2030 in the Kingdom of Saudi Arabia. Smart applications have a role in the speedy completion of work and obtaining the service, ease of obtaining the service at any time and place, achieving the quality of life for the beneficiaries, reducing operational costs, improving the work environment, increasing competitiveness, raising the level of service, and increasing customers' satisfaction of the provided services.
3. The most prominent obstacles that limit the use of smart applications in achieving the goals of Vision 2030 are the weakness of data protection systems, the lack of training programs on the management of smart applications, the rapid development of smart applications, the absence of accurate and integrated databases, the lack of continuous control over the workflow electronically, the weak Arabization of foreign systems and programs, the difficulty of electronic linking between departments and the high financial cost of designing and developing applications.

Recommendations

Following the discussed points, it is recommended that organizations invest in comprehensive training programs focused on smart application management. Additionally, engaging external consulting agencies can aid in the design and development of applications tailored to the needs of beneficiaries at all levels. Also organizations should enhance data protection systems and actively communicate these measures to beneficiaries to mitigate concerns and encourage the widespread use of smart applications. In addition organizations must ensure the seamless progression of electronic workflows and implement mechanisms for ongoing evaluation of beneficiary satisfaction. Addressing

identified issues promptly will enhance the effectiveness of smart applications. For the Saudi context, attention should be given to Arabizing foreign systems and software, as well as developing accurate and integrated databases. This will ensure that smart applications are accessible and functional for all beneficiaries. They need to allocate adequate financial resources for the design and development of smart applications. Additionally, investing in qualified personnel to manage these applications will ensure they are strategically integrated into organizational activities. On boarding activities and regular awareness programs should be conducted to inform employees about the goals and activities of the quality department. Engaging employees in these initiatives will foster a supportive environment for the adoption and optimization of smart applications.

The study deliver the following recommendation which could formulate future research study to examine the recommendation effectiveness:

1. Increasing training programs on smart application management and the use of external consulting agencies in designing and developing applications suitable for beneficiaries at all levels.
2. Increasing data protection systems and informing the beneficiaries about them so that they have no fear of using smart applications.
3. The organizations verify that the work progresses electronically and continuously evaluate the extent of the beneficiaries' satisfaction and the problems facing them and put immediate solutions.
4. Attention to Arabizing foreign systems and software and providing accurate and integrated databases so that all beneficiaries can use smart applications.
5. The need for organizations to pay attention to providing the necessary financial allocations for the design and development of smart applications and the provision of qualified human resources to manage them in order to be a strategic activity for the organization and not a secondary thing.
6. The importance of periodic awareness of employees, informing them of the goals and activities of the quality department and engaging them.

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