"Evaluate the impact of KMS and DSS on success SMEs in Oman: A Case Study of SMEs Performance in Oman."

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ABSTRACT:

Small and medium enterprises in Oman are considered one of the vital sectors that play a prominent role in economic growth, through the mechanism of improving the country's economic indicators, to keep pace with technological development and address issues (unemployment, development and poverty). The initiative and innovation also play an effective role in economic growth and raising the efficiency of the institution, as the interest in SMEs is an ideal solution to address the problems facing the economy and development, represented by stagnation, inflation and high unemployment rates. The social importance of these institutions lies in creating a productive community of young people that trusts their capabilities and believes in self-employment. This article will discuss achieving technological innovation and enhancing creative capabilities in small and medium enterprises in Oman, knowledge of innovation and entrepreneurship factors, challenges and mitigation measures facing these enterprises, the role of leadership behavior of managers and their results in decision-making, assessing the relationship between knowledge management and decision support in developing strategies from In order to promote SMEs. Finally, make recommendations for best knowledge management practices that SMEs can use to solve employee problems with leaders.

Key words: Knowledge, KMS, DSS, Innovative, Strategies, SMEs, Leadership Capabilities.

Introduction:

The most important element of the success of SMEs in the Sultanate of Oman is to change them to keep pace with developments and maintain competition and their ability to survive in the market in light of the technological revolution that the world is witnessing. The strategic objectives of the organization used to support decision-making to reach best practices, the availability and availability of information to all employees of the organization and external beneficiaries - depend on the maximum. Using the information available in the institution and on the individual experiences in the minds of its employees, which is the best investment for intellectual capital, in terms of converting it into a productive force that contributes to developing the performance of the individual and raising his capabilities and the level and efficiency of the institution. Small and medium enterprises in Oman are a vital sector that plays a prominent role in economic growth. The social importance of these institutions lies in creating a productive community of young people that trusts their capabilities and believes in self-employment.

The Small and Medium Enterprises Development Authority (SMEs) was established, its terms of reference were defined and its organizational structure approved by Royal Decree No. 107/2020, based on the statistics of the institutions registered with the Authority, which amounted to 48,987 institutions until January 2021, while the total number of entrepreneurship card holders reached 16,067 establishments, and 22,964 verbatim by the end of December. (Haitham bin Tarik, 2020). The statistics of the lending portfolio of the Al Raffd Fund since its actual launch in 2014 until the end of 2020 amounted to 6,930 loans beginning in the operation of the Fund in all governorates of the Sultanate, including the various economic sectors according to the priorities of (Oman Vision 2040) targeting non-oil sectors with 93% of Gross Domestic Product (GDP), as Muscat ranked first in the number of registered small and medium enterprises, which amounted to 16,332 by the end of December 2020. (al-Zayani, 2019).

This dissertation will discuss the achievement of technological innovation and the enhancement of creative capabilities in SMEs in Oman, the knowledge of innovation and entrepreneurship factors, challenges and mitigation measures facing these institutions, the role of leadership behavior of managers and its results in decision-making, evaluation of the relationship between knowledge management and decision support in developing strategies In order to promote small and medium companies, explain the importance of these companies in supporting the national economy in light of the Corona pandemic, Finally, I will present recommendations for best practices.

I.   Research Problem:

Small and medium enterprises play a prominent role in economic growth, through the mechanism of improving the country's economic indicators, to keep pace with technological development and address issues (unemployment, development, poverty). Initiative and innovation constitute an effective role in economic growth and raising the efficiency of the institution, where interest in small and medium enterprises becomes an ideal solution to address the problems facing the economy and development, such as recession, inflation and high unemployment rates, to create a productive society of young people that trusts their capabilities and believes in self-employment. However, these organizations cannot rely solely on the leadership behavior of their managers and their results in decision-making. Rather, identifying the innovation factors to know the effect of knowledge management on achieving technological innovation and enhancing leadership capabilities becomes necessary in terms of adding value to knowledge and allowing more innovation and creativity, and to overcome these challenges in Oman, modern strategies must be developed in order to develop these institutions to advance them, given the importance of These companies meet the requirements of work, enhance efficiency and support the national economy.

Aims of the Study:

This study aims to find an optimal solution to determine the effectiveness of a knowledge management system and decision support and to know the consequences of applying such system. Furthermore, determine the effect of knowledge management on achieving technological innovation and enhancing leadership and creativity capabilities.

II.   Literature Review:

KM is a strategy aimed at obtaining an integrated systemic approach, when the organization applies it that allows it to optimally use the correct knowledge by the right people at the right time, in order to ensure that people are helped to share information for the purpose of improving organizational performance, and it also facilitates knowledge discovery and innovation. , It promotes the development of learning and understanding organization by integrating all sources of information, in addition to knowledge and enhancing individual and group experience. Knowledge management (KM) is considered as a process to enable the flow of knowledge by enhancing mutual understanding, learning and decision-making. (Girard, 2015). Knowledge management (KM) is also seen as a process of collecting knowledge capital for employees, managing and sharing it throughout the organization, as KM provides efficient and more effective business operations, by removing redundant processes, as KM is a priority for companies of all sizes - small, medium and large- In order to obtain the most important knowledge for the company and then distribute it. (Gunjal, 2019).

A.   KM System work with IoT:

The way knowledge is managed within organizations works in the field of Internet of Things (IoT), in order to manage a new, innovative knowledge system with an open approach, as enhancing knowledge flows leads to the development of the internal capacity for knowledge management, which is necessary for the creativity of the institution. The knowledge management and open innovation system possesses the ability to manage knowledge and the ability to innovate, which facilitates the creation of open and collaborative ecosystems, and the exploitation of internal and external flows of knowledge, by developing the internal capacity of knowledge management, which would increase the capacity for innovation. (GabrieleSantoro, 2018). The Internet of Things (IoT) and big data play a major role in the mechanism of corporate governance and make them amenable to digital transformation, and their outbreak led to the accumulation of a mass of unorganized knowledge, which can be considered as factors for re-

engineering business processes, services and products, which clearly affect many Business aspects. (AndreaSestino, 2020).

B. Important role of KM in TQM and CS:

The important role of knowledge management (KM) in the relationship between TQM and corporate sustainability CS is recognized by investigating how knowledge management mediates the relationship between TQM and CS. That TQM has a large and positive influence on computer science, and knowledge management partly mediates the relationship between them. The results provide valuable insights into managing manufacturing and services and how they can ensure sustainability in SMEs through Total Quality Management and Quality Management. (JawadAbbas, 2020). The figure below has shown the relationship between TQM and CS:
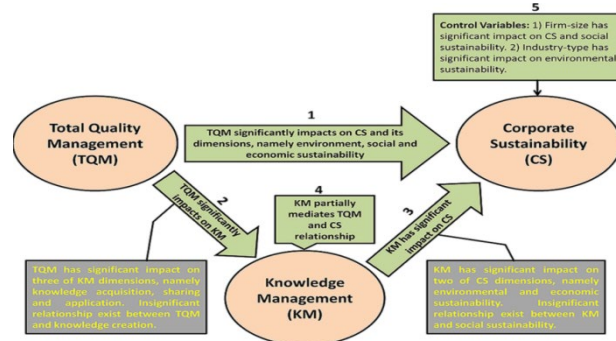

Figure 1. The relationship between TQM and CS, (JawadAbbas, 2020).

C. The impact of KMS quality on the usage:

The quality of a knowledge management system (KMS) has a significant impact on the continuity of users, as both the quality of the system and the quality of the information / knowledge can influence all factors that drive the continuity of the use of KMS - such as (perceived benefit, satisfaction, and trust). Moreover, the satisfaction has a great influence on the users' recommendation to use the key management system. Therefore, companies should improve KMS quality in order to motivate employees to use KMS consistently and recommend it to others. (Eko K. Budiardjo, 2017).

Benefits and Features of the KM System:

Knowledge is becoming an increasingly important organizational asset at the present time, and in the process many companies expect that implementing knowledge management systems (KMS) will enhance their organizational knowledge management activities well in them. Also, some companies view KMS as a strong source of competitive advantages. However, KMS implementation differs from traditional enterprise information systems, in that its implementation is difficult and risky, because these systems are not technically regulated and innovative, and therefore, great effort is required in order to identify the factors that affect the implementation of KMS in the business.

The KMS is an information system that was specially developed in order to facilitate the processes of creating, storing, retrieving, transferring, and applying organizational knowledge, and this indicates that the main purpose of KMS is to take advantage of organizational knowledge management behaviors, although KMS has several varied forms, but There are three features that are the most prominent of KMS they are (Knowledge repositories, knowledge maps, and collaborative tools), (Wang and Wang, 2016).

Decision Support System (DSS):

The Decision Support System (DSS) is a treatment of DSS performance comments, in terms of response time, measuring mission motivation and DSS motives, tracking the use of DSS in order to obtain basic information for evaluating decision performance, through joint analysis. DSS is also used in the relationship between DSS motivation and decision performance. Moreover, DSS motivation is higher when there is a higher motivation for the

tasks, with more positive reactions to DSS performance, and with a faster DSS response time. (Siew H.Chan Q. S., 2017). The motives of the Decision Support System (DSS) lie in the disposal of data and intelligence, to withdraw unprecedented and potential clarifications, and in order to control decisions that are under indecision. The expansion and integration of DSS with institutions or information and communication technology systems can reduce the achievement of expenditures at the lowest possible cost and time, in order to identify the urgent concerns to make decisions that are more appropriate to the complexities or constraints facing the system in the organization. In spite of this, the progress and integration of the decision support system (DSS) with the information and communication technology structures of the institution or organization, and the reduction of expected time and expenses would focus on the main issues related to drafting and understanding decisions more appropriately. (Fakeeh, 2015).

Summary: Knowledge management, as we previously mentioned, is a strategy that aims to obtain an integrated, systematic approach in order to enhance efficiency and support the national economy. In turn, it promotes the development of organizational learning and understanding by integrating all sources of information, as it has been defined as a process to enable the flow of knowledge by promoting mutual understanding, learning and decision-making. (Girard, 2015). In addition, it is a process to collect, manage and share knowledge capital for employees throughout the organization, as knowledge management is of great importance to SMEs in Oman, in order to obtain the most important knowledge for the company and then distribute it.

Methods:

Knowledge management has a relationship in improving institutional performance, through traditional measurement methods and modern measurement methods (balanced scorecard). Where traditional methods of measurement focus on finding the best way to reduce costs in terms of the use of capital and technology, with the aim of maximizing profits and achieving goals in general. As for modern measurement methods (Balanced Scorecard), several criticisms have been directed at performance measures, changing the manufacturing environment, and increasing competition between institutions. Most organizations have tended to use a new system for measuring performance, which is the balanced scorecard, as this card included special aspects such as: speed of delivery to the customer, the quality of applied processes, the effectiveness of developing new products, as well as financial metrics. The figure below illustrates knowledge management methods and their relationship to improving the institutional performance of SMEs;
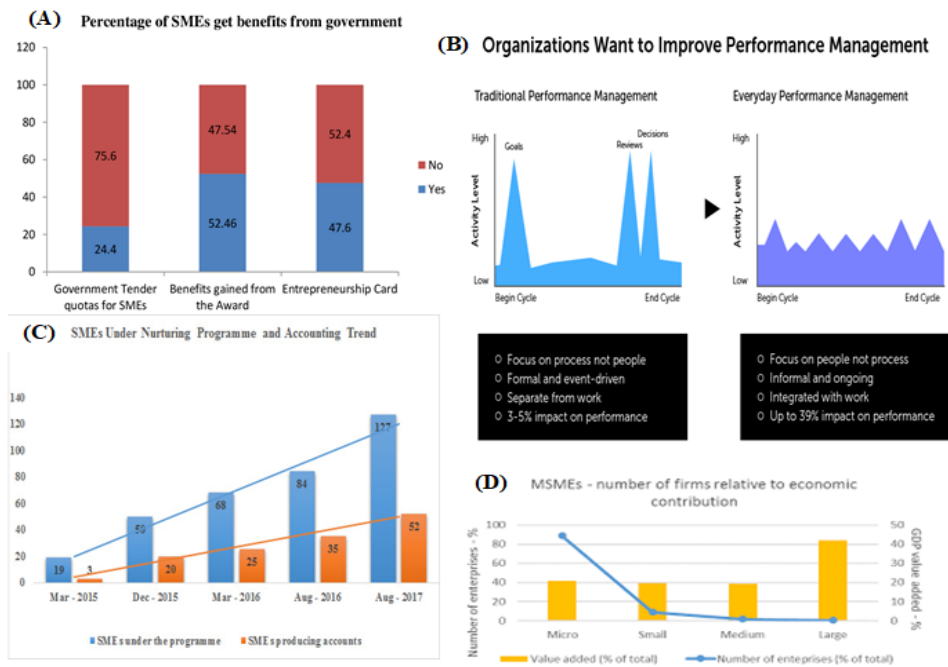

Figure 2. KM Methods for SMEs (Mondal, 2019)

Figure 2. KM methods and their relationship to improving performance of SMEs, knowledge management methods and their relationship to improving the institutional performance for Small and Medium enterprises, As seen in figure 2(A), Percentage of SMEs get benefits from government, The government tender explains, where 47.54% of small and medium enterprises reported that they did not receive any tender from the government department, as the General Authority for Small and Medium Enterprises in Oman issues entrepreneurship cards to citizens in order to support and simplify government procedures. In spite of that, the percentages showed that 52.4% of small and medium-sized companies did not obtain an entrepreneurial card. And figure 2(B), shows the curve of organizations wanting to improve performance management, Traditional performance management affects 3-5% on performance, but daily performance management reaches 39% which affects performance and activity level.

The figure 2(C) shows, small and medium-sized enterprises under the program of sponsorship and accounting trend, as the small and medium-sized companies under the program reached the highest levels compared to the production accounts of small and medium enterprises in the Sultanate of Oman, where the small and medium-sized companies under the program recorded their highest percentage in 2017 At a rate of 127 million Omani riyals, while the production accounts of small and medium enterprises recorded their lowest rate in 2015 at 3 million Omani riyals, and this shows that the government has paid more attention to small and medium enterprises in the recent period. And the figure 2 (D) shows, the number of SMEs in Oman in relation to the economic contribution in terms of value added (% of total) and the number of firms (% of total). Where 40 companies from the micro, small and medium companies had the merit of achieving an income estimated at 20% through the application of value-added to the GDP, while 90 large companies entered the proportion of 42% through the value-added to the gross domestic product as taxes to the government. Oman Vision 2040 contributes to the adjustment of the economic conditions of Oman through the application of taxes to pay the state's financial obligations to the World Central Bank.

Any system contains several gaps, that the ecosystem to support SMEs in GCC has major gaps that discourage knowledge management and decision support in it, and in order to improve the system, adjustments must be made at the levels of the ecosystem in order to support small and medium-sized companies in Oman, as it requires a small number of these aspects to Relatively higher concentration. The Figure below illustrates the major gaps in the ecosystem to support SMEs.
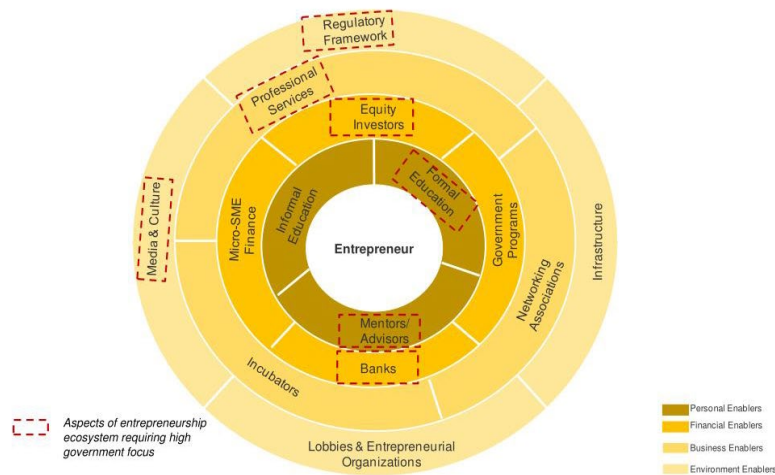

Figure 3. Key Gaps in the SMEs Support Ecosystem (Williams, 2014).

Through the above figure, which illustrates the main gaps in the ecosystem to support small and medium enterprises, and as we mentioned earlier in order to improve the system, some levels of the ecosystem must be modified to support these institutions, aspects of the entrepreneurship ecosystem may require a significant government focus by economic development agencies Entrepreneurship and small and medium enterprise development, with the aim of creating real value for sustainable economic development, not only in Oman, but also in the Arab Gulf and the world. By improving these levels and eliminating the gaps, the ecosystem will regain its vitality and support small and medium enterprises, thus eliminating unemployment and poverty and providing well-being for the people.

Results

Knowledge management helps to spread knowledge to individuals or groups in ways that directly affect performance, in order to obtain the correct information for the right person at the right time to work in a correct manner. Providing knowledge stimulates the creativity of each employee to be creative in the best way.

Various challenges faced by SMEs (percentage):

There are many problems that small and medium enterprises SMEs suffer from, including the following:
1) Lack of adequate and competent managerial skills and business administration.
2) Finding clients.
3) Competition.
4) Obtaining financing.
5) The high cost of financing.
6) Cost of production, labor, or rent.
7) Availability of skilled personnel or experienced managers.

After research and investigation, the following results were obtained, as shown in **Table 1** below, the various challenges that SMEs face (percentage);

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	Total
Lack of Knowledge	15.2	18.8	22.0	23.2	20.8	100.0
Finding customer	11.2	13.2	18.0	27.2	30.4	100.0
Competition	12.0	18.0	16.8	18.0	35.2	100.0
Access to finance	27.2	16.4	18.0	19.2	19.2	100.0
High cost of finance	23.6	24.4	20.0	19.6	12.4	100.0
Labor cost or Rent	24.0	22.8	18.4	15.2	19.6	100.0
Lack of skilled staff	40.0	12.8	13.6	16.4	17.2	100.0
Lack of Regulations	70.0	10.8	6.0	7.2	6.0	100.0
Administrative Burdens	71.2	8.8	8.0	7.2	4.8	100.0

Source: SMEs survey data

Table 1. Various challenges faced by SMEs (Mondal, 2019)

While **Table 1** summarizes the problems faced by small and medium-sized enterprises, as activities are crucial to the success of a business, and mismanagement always leads to results that do not succeed. This study found that the lack of managerial skills of the manager or leader has an important role in the success of the organization, as well as finding clients, the presence of the spirit of competition, the high cost of financing, the unavailability of employees and skilled managers, and other problems that are among the most important and most problems faced by small and medium companies in Oman.

Discussion:

Knowledge Management and Decision Support works to determine the effectiveness and knowledge of the results of implementing this system, by determining the impact of knowledge management in achieving technological innovation and enhancing leadership and creativity capabilities, By developing modern strategies for the success of SMEs in Oman.

Conclusion:

The knowledge management and DSS in SMEs in Oman is one of the most important systems for using knowledge in a correct and timely manner. Also, one of the most important things that must be taken into account is the correct and logical support for managers 'decision, encouraging employees to be creative at work, creating a spirit of competition and not persecuting or belittling employees. The success of SMEs in Oman or in the world depends on the correct management of knowledge in the enterprise, because it is the only way for the success of the enterprise, and if it is not present, it leads to the collapse of the enterprise. In addition, today, SMEs play a major role in supporting the national economy through In-country value added to adjust the state budget and reduce unemployment and poverty in society. The rational government has given important and supportive policies to preserve these small and medium enterprises to survive and to ensure that they do not collapse in Oman.

Limitations:

In every research there are possible difficulties facing the researcher, and in this section some of the problems and difficulties that the researcher faced were clarified, as the first difficulty in collecting primary data was the month of Ramadan and the summer vacation, because at this time most of the employees and administrators are on vacation, so this is difficult to collect information. The survey will be distributed to 7 small and medium enterprises to fill the gap due to employee vacations and because of the reduction in the number of employees in government and private institutions due to the Corona pandemic (COVID-19). Secondly, the period of this dissertation coincided with the period of the official and religious holidays of the country (Eid al-Fitr and Eid al-Adha), which delays the researcher in completing the survey faster. For the analysis stage, the researcher will use SPSS Statistics is a software package used for interactive or combined statistical analysis, which will take the researcher to learn and deal with it a long time because he is the first time to use this software package and has not previously dealt with it. Finally, the interviews and some articles and newspapers are found in Arabic, which takes time to translate to English.

Acknowledgements:

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