

Information System Effectiveness And Its Effect On Organisational Agility

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Abstract:

Organizations must have different competitive features to compete in today's unpredictable and competitive world, or they will face extinction. Agility is one of the characteristics that organisations require in turbulent environments. Agility allows an organisation to respond quickly and be environmentally friendly while also increasing its efficiency. A number of factors have an impact on the organisation. One of these is information systems IS which has an impact on both the organisation and its characteristics. This paper aims to investigate the information systems effectiveness and organizational agility its various aspects. Agility, organisational agility, information technology, and the impact of information technology on organisational agility are all terms used in this paper.

Keywords: *Agility, organizational agility, information systems effectiveness.*

INTRODUCTION

Information systems have taken a wide position in various fields and developed rapidly due to Globalization. The most important features and benefits achieved by these systems are the speed of achievement and the ability to provide appropriate solutions to various problems in organizations. Many organizations provide comprehensive, integrated and specialized management information systems that carry out rapid and different operations and facilitate the work of communications with the organization and its external surroundings. To enhance the position of any organization and achieve its desired goals. Therefore, information systems of all kinds have become of great importance to meet the challenges and crises facing organizations in general, and they represent one of the basic resources for organizations to face all their crises, and this system reinforces the best way to deal with These crises are presented in a clear scientific manner based on the accuracy of quantitative and qualitative information in a timely manner. The world faces many challenges, most notably the rapid increase in the pace of change sometimes unexpectedly; This makes it difficult for any organization to accurately determine the size of the challenges it faces, or to anticipate the correct behavior so that it can deal with them effectively.

ORGANIZATIONAL AGILITY

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Agility is a source language for the word (Rashq), which means lightness and speed at work (the dictionary of the leader), while in the Oxford dictionary, it means agility: the ability to move quickly and easily. The concept of agility emerged as a term used in research starting in the year 2000, through the efforts of a group of researchers at the Lacocca Institute at Lahey University in a study entitled: "The strategy of manufacturing enterprises in the twenty-first century from the point of view of industry experts." The study the researchers should do more studies related to this concept (Hanieh, 2016). Agility is defined as: a reaction against the current challenges in the workplace, which are made by change and the lack of certainty in organizations (Boudlaie, et al., 2015). Agility is also defined as: the ability to detect opportunities and threats, and respond to them easily and quickly. And skill, along with appropriateness, as a basic necessity for business (Tallon&Pinsohneault, 2011) (Al-Hunaiti, 2019 p. 55) defines agility as: the ability to respond to unexpected changes quickly and flexibly, and to exploit these changes. Optimizing the changes and looking at the change as an opportunity for progress and prosperity. It is clear from the presentation of definitions of organizational agility that it is one of the ways to adapt to changing conditions, contribute to achieving outstanding performance, and achieve the necessary balance with unexpected sudden events.

IMPORTANCE OF ORGANIZATIONAL AGILITY

Organizational agility is also one of the concepts associated with the modern organization, and it emerged as a result of the severity of the changes and its rapid pace, and is a way to increase the ability of organizations to face challenges and rapid changes and adapt to them, and to achieve high and distinct levels of performance (Al-Masry, 2019, p. 351). The two researchers believe that the importance of organizational agility is evident through understanding and realizing the amount of changes and acceleration, and that it enhances the competitive advantage and gives the organization growth and continuity in achieving outstanding performance (Park, 2011, p) (El-Sawy, 1985).

MANAGEMENT INFORMATION SYSTEMS

The nerve center of any organization, as they work to provide information to various administrative levels when needed for the purpose of exercising their functions in planning, organizing, controlling and others(Al-Abedy, 3103, pp. 017-071). And the management information system is defined as a set of technical, human, material and administrative elements that are intertwined and interact with each other, that work on collecting data and information, processing, storing, broadcasting and distributing it for the purpose of supporting the decision-making, coordination and securing control of the organization (Kandilji and Al-Janabi, 2005), while (Al-Husnia, 1998) ." As Alter (1996) defined it as "the system that depends on information technology in collecting, retrieving, storing, processing and distributing information used in one or more administrative processes." And I defined it (Al-Dahan, 1992) as a system designed to provide accurate and appropriate information at the right time for managers to use in the decision-making process." (McLeod, 1990) believes that the management information system has a defined procedural definition, as it "consists of a group of Formal and informal systems that provide management with past, current and predictive information in an oral, written or visual form for the internal operations of the organization and the elements of the surrounding environment, with the aim of supporting administrators, especially managers, by providing accurate and clear information, and in the appropriate time frame to assist them in carrying out work, management and decision-making. " The authors and researchers gather on six components of the management information system: hardware, software (systems and applications), databases, ajwas, people, and communications (25.Park,

2011, p) (239.Thomas et al., 1993.). An organization that is able to achieve this combination successfully, will be able to take advantage of the advantages that the information system provides for all its management levels.

EFFECTIVENESS OF THE MANAGEMENT INFORMATION SYSTEM AND ITS MEASUREMENT

The field of effectiveness represents the broadest and most comprehensive concept of business performance, so finding a specific, accurate, and agreed-upon definition is difficult in the management literature. Kanter and Brickerhoff) (1981) express their pessimism about reaching a final and expressive formula for the concept of effectiveness by saying, "Some management writers have gone too far in studying the issue of effectiveness without reaching a logical conclusion. And specific." And it was explained (, Robbins and Cenzo 1995) that effectiveness means making sure that the use of available resources has resulted in achieving Objectives The desired objectives are "The effectiveness of information systems is defined by Tong and Yap (1996."(Al-Tai, 2004) explains that the debate about the concept of effectiveness within the management information system has resulted in five basic entrances that can be used as a guide in determining the effectiveness of the system, which are:

- **The goal entrance (outputs):** It is the most common entrance in use, and effectiveness is defined as the extent through whichThe system can achieve its goals.
- **Resource input (input):** This entry determines the effectiveness within the framework of the system's location from the external environment. According to this approach, the effectiveness of the system refers to the ability to obtain scarce resources; the inputs here replace the outputs in Importance.

LITREATURE REVIEW

(Cai, Liu, Huang, & Liang, 2019): The study aimed to find out how to take advantage of the ability of information technology On building organizational agility in the context of product innovation, he proposed a moderate media model from the perspective of capacity building processes, and adopted Researchers on the descriptive analytical method; To answer the study's hypotheses and questions, the data was collected through a questionnaire distributed to (021) of senior executives of information technology companies in China.

(Egbuniwe&Maeyouf 2019,): The study aimed to monitor the impact of information technology on the productivity and organizational agility of telecommunications companies in Libya. The researchers used the descriptive analytical approach, and the data were collected through a questionnaire divided into three parts. The productivity of the company in terms of market profits and organizational agility in companies, and it was distributed to (201) respondents who use telecommunications in Morocco. Great interest in the growth and integration of information technology in it, and the great interest in the dependence of companies on information technology; it affects well in improving production efficiency and reliable organizational agility, and gives a better competitive advantage. Study (Panda & Rath 2016): The study aimed to identify the structural link between the capabilities of information technology and organizational agility in Indian financial institutions, and the extent to which information technology can increase or impede organizational agility. The researchers used the descriptive analytical approach; To answer the questions of the study and test its hypotheses, the data of the study were collected through a questionnaire that was distributed to (211) executive directors specialized in business and information technology in Indian owned

enterprises.the private sector, most notably, that the ability of information technology enables the achievement o organizational agility, The relationship between IT capabilities and organizational agility is positive in Indian financial institutions.

RESEARCH METHODOLOGY

The research methodology is used to testtheories or concepts. The main technique ofdata is used to collect the required data. All data is collected through interviews of target group thatbased on structured questionnaire.

SAMPLE

Data were collected from blade companies operating in India in the state of Haryana through a special design .The questionnaire which will have multiple options, and also an open question posed orally to get the concept Insight and depth of answer. The respondents will be SME workers, production managers and owners. Goal The audience includes approximately 150 respondents. The sample small and medium industries that we will choose are related to different business sectors.

DATA ANALYSIS

In this section, we will try to show the characteristics of the studied sample through the use of statistical methods In addition to analyzing the questionnaire's axes, as well as presenting, analyzing and interpreting the results of the study and the SPSS test, depending on the program .The hypotheses put forward in order to answer the research problem and questions. The first requirement: Describe the characteristics of the study sample.

Characteristics of the sample: This sample is characterized by the following characteristics, which we represent in the following table: Table No. (1) General characteristics of the study sample

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
The firm delivers an information systems plan that is aligned with the company's overall strategy.	74.3780	92.030	.469	.813	.749
The volume of business through management information systems has increased over the previous year.	74.4341	95.117	.339	.881	.758
MIS enables the organization in keeping up with developments in the work environment.	74.3341	91.103	.518	.771	.746

Table 1: Item wise reliability analysis of different variables of

Management information systems technology makes it easier to reach customers.	74.4634	94.895	.338	.826	.758
Management information systems technological tools are utilized to achieve competitive advantages.	74.4000	95.840	.326	.907	.759
The company's organizational structure supports the adoption of MIS.	74.4000	92.832	.457	.786	.750
Information is a critical source for decision-making in a work environment.	73.6293	101.231	.098	.627	.772
Top management makes decisions based on information given by management information systems.	73.6439	101.179	.099	.569	.772
You feel that organizational MIS are beneficial to your company's ongoing growth and innovation.	74.3122	92.245	.475	.832	.749
The strategic plan for management information systems is consistent with the company's strategy.	74.3122	93.056	.430	.833	.752
Your company has computers that provide for quick access, information processing, and storage.	74.5220	91.482	.582	.799	.743

management information system

Table 2: General characteristics of the study sample

Variable	Categories	Frequencies	Percentage
Gender	male	19	45.2
	Female	23	54.5
	Total	42	100

Variable

Less than 29years	14	33.3
From 30 to 39 years	16	38.2

Age	From 40 to 49 years	10	23.3
	From 50 years	2	3
	Total	42	100

Variable

Educational level	Bachelor	8	19.0
	Masters	17	40,5
	Ph.D	13	31.3
	Total	42	100

STUDY TOOL STABILITY

Use Cronbach's Alpha to check consistency. The internal consistency means the extent to which items are measured for the same concept (Tavakol and Dennick, 2011). The results appear in Table (4), from which it is clear that the Cronbach's alpha coefficient for the resolution as a whole has reached (0.879), which is good rate.

Table 3: Testing by Shapiro-Wil

Variable	Dimensions	test Shapiro-Wil
Management information system MIS	End-user satisfaction	0.878
	suitability of the system to the administrative levels	0,789
	Information security:	0.788
	Speed Decision-making	0.877
Organizational Agility	Sensing Agility	0.858
	Acting Agility	0.773
	Decision-making Agility	0.848

The estimations of the sample members for the items of the research work: where the arithmetic mean. The results shown in that the overall degree of importance of the axis of administrative information systems came to a high degree (arithmetic mean = 4.06 standard deviation = 0.230). All areas of the axis were graded High, as their arithmetic averages ranged between 4,19-3,82).

ASSUMPTIONS OF THE LINEAR ANALYSIS

Normal saturation fertility: The results of the normal distribution indicated that all the variables under study follow the distribution natural, based on the Shapiro-Wilk test values, which appeared with a level of significance greater than (0.05). Shapiro-Wil.

Table 4: Test by Shapiro-Wilf of the normal distribution

Variable	Arithmetic Mean	standard deviation	Relative importance
End-user satisfaction	0.967	300	0.421
suitability of the system to the administrative levels	0.969	300	0.321
Information security:	0.970	300	0.145
Speed Decision-making	0.953	300	0.121
Sensing Agility	0.971	300	0.300
Acting Agility	0.966	300	0.421
Decision-making Agility	0.978	300	0.429

Table 5: Linear Inflation Factor: Use the Variance Inflation Factor (VIF) and values Tolerance to verify this test

Variable	B	T
End-user satisfaction	1.841	0.712
suitability of the system to the administrative levels	1.954	0.651
Information security:	1.945	0.588
Speed Decision-making	2.342	0.785
Sensing Agility	2.116	0.710
Acting Agility	1.882	0.388
Decision-making Agility	1.749	0.421

The results in Table (4) showed that all values of the difference inflation factor are less than (7) and that all values of the variance inflation factor are less than (7). The allowable variance

is greater than (0.1). Which means that the study model is free from the problem of linear coupling between the variables.

CONCLUSION

The conclusion based on the previous analysis that management information systems are useful and important in improving the organization's performance in everything related to growth, profitability and innovation, relying on a variety of systems. A management information system functions to assist in transaction processing, strategic planning, operational control, and administrative control. The study showed that information systems have a significant and positive impact on the characteristics of the organization through the results obtained from the questionnaire and based on (Cronbach's alpha coefficient). The results showed that the overall degree of importance of the management information systems axis was high and that the study model is free from the problem of linear coupling between variables.

RECOMMENDATIONS

Based on the results of the study, we recommend the managers and decision makers of the Indian telecom company to:

1. Designing diverse and secure information systems, in which all information systems overlap in their duties, including the management information system, which is able to provide appropriate information for administrative levels and according to specialization and duties.
2. Using and adopting a modern and effective information system that satisfies the aspirations and desires of the recipients and users of the system, establishing an atmosphere of cooperation between the users of the system and those in charge of it, and holding continuous meetings between them to provide them with all that is new, which will positively reflect on the effectiveness of the system
3. . Training managers at all levels of management on how to use and exploit information, and how to Making important decisions in crisis conditions and the mechanisms for conducting studies and research for the administrative position, and strengthening teamwork and dialogue among decision makers, as decision-making is in a hurry without taking action.
4. This study makes the decision incorrect and does not provide appropriate solutions for any situation during the crisis, and accordingly this training will ensure speed in making important decisions for any situation in a potential crisis
5. Involve all users of the system in modern courses that qualify them to work on modern systems, and take advantage of them as much as possible to increase their professional, technical and personal capabilities in line with the requirements of modern technology, and speed in using these systems to find solutions to the problems they face and find the mechanism

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