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# Impact of Information Technologies Capabilities in Strategic Decision-

making: A Survay study in Mosul University

Modhar Hamed Saleh

Ali Jassim Shlash

Ali Samir Ali

modhar hamed@uomosul.ed

ali\_jasim@uomosul.edu.iq

ali samir@uomosul.edu.iq

College of Administrations and Economics- University of Mosul

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#### **Abstract**

Capabilities is the level of performance of the organization in the business environment and strategic decisions. Are those decisions that deeply affect the destiny and future of the organization through the response and compatibility between these decisions and the requirements of the environment, this may be a fair beginning to achieve the view that the relationship must be inherent to the beginning of each idea, Therefore, the research problem has been identified that the management of the organization cannot determine the level of capacity that it possesses. Studies have shown that IT capabilities play a major role in successful strategic decision-making, thus enabling them to achieve outstanding performance. Hence, the researchers started to define the dimensions of the problem of the study on the possibility of reaching a successful strategic decision based on the IT capabilities of an organization working in A fast-changing environment.

There are many organizational capabilities such as ability to process, ability to innovate, manageability, alliance capabilities, service capabilities, financial capability, etc. But this study focuses on information technology (IT).

The information has been gathered by using questionnaire survey in Mosul University, 39 questionnaires have been obtained out of 45 respondents, and data have been collected and analyzed. After data analyzing, significant results of both dependent and independent hus, we variables have been gotten. Tcan find out the idea of the effecting of IT Capabilities in Strategic Decision.

**Keyword**: Information Technologies (IT), capabilities, strategic decision-making

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#### Introduction

The world today is witnessing an unlimited growth in the use of information and communication technology in various fields, so that its applications have become an important element of the activities carried out by business organizations, Given the accuracy and speed of this technology that helps senior management in strategic decision-making, it has quickly been accompanied by so-called it capabilities and one of the most important roles it plays is to link individuals and institutions, which has affected the effectiveness of strategic decision-making. This is because strategic decision-making depends largely on the availability, type and comprehensiveness of information and the degree of its analysis and translation. Also, organizational capabilities have taken on a more contemporary notion, due to turbulence in business markets, and the unstable climate faced by business organizations which prompted them to search for ideas through which they can maintain their survival and increase their competitiveness. The term organizational capabilities refers to the ability of the organization to bring together the right people with the right skills, using the right machines and equipment through effective work processes, and then presenting them as a strategy (Sirbel, 2012:14).

To achieve the above, the research came with three sections, the first is the methodology of the study, while the second contains the theoretical framework that deals with the concept of IT infrastructure, its importance and components, as well as the concept of strategic decision and its importance and types. The third section was devoted to the field side and the most prominent conclusions reached.

#### 1. Methodology

#### 1.1 Research Problem

There are many factors affecting the strategic decision of senior management in organizations, especially IT capabilities, as field visits conducted by researchers to the colleges and departments of Mosul University revealed that the researched organization does not use it capabilities properly to support strategic decision-making. The problem of the study can be identified through the:

Do IT capabilities contribute to supporting strategic decisions at the University of Mosul?

#### 1.2 importance of the study

Based on the importance of IT in the researched organization and the importance of strategic decisions, the importance of this study is highlighted by seeking to achieve the desired goals of the organization, including reaching the right strategic decision, in addition to working to clarify the concept of IT capabilities and components, the IT infrastructure of the researched organization to see if it can affect the strategic decision. The importance of the study lies in:

- 1. Determine the extent to which information technology capabilities contribute to strategic decision-making
- 2. Determining the information technology capabilities available in the research organization and trying to activate its role in order to reach the strategic decision.
- 3. Increasing the awareness of the strategic leaders at the University of Mosul of the most important challenges they face, the most important of which is the strategic decision

#### 1.3 objectives of the study

1- To examine the relationship between IT capabilities and Strategic Decision.

To answer research's questions, test-2 the hypothesis, show the value of the relationship IT capabilities and Strategic Decision. between

To present a theoretical background of the IT capabilities and Strategic Decision. -3

#### 1.4 Hypotheses





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Dependent Variable

Based on what was raised in the problem of the study above, the hypotheses of the study can be formulated as follows:

- H1: There is no significant correlation between IT capabilities and strategic decision.
- H1-1: There is no significant correlation between Infrastructure Capabilities and strategic decision.
- H1-2: There is no significant correlation between Human resource capabilities and strategic decision.
- H1-3: There is no significant correlation between Relationship resource capabilities and strategic decision.
- H1-4: There is no significant correlation between Dynamic capabilities and strategic decision
- H2: There is no effect of ICT capabilities in making strategic decisions.
- H2-1: There is no effect of Infrastructure Capabilities in making strategic decisions.
- H2-2: There is no effect of Human resource capabilities in making strategic decisions.
- H2-3: There is no effect of Relationship resource capabilities in making strategic decisions.
- H2-4: There is no effect of Dynamic capabilities in making strategic decisions.

In order to be able to test these hypotheses, the hypothetical model for the study can be formed in the following form:

# Infrastructure Capabilities Human resource capabilities Relationship resource capabilities Dynamic capacity Strategic Decision

### 1.5 Methodology and tools of study

Independent Variable

The study adopted the analytical descriptive approach to testing its hypotheses by studying the relationships between the main variables derived from its data from the research organization, and by adopting the questionnaire form as a research tool whose questions were formulated by returning to the conceptual frameworks of the subject discussed by some approved studies, noting that the form adopted the triple Likert scale, and adopted some statistical methods of (analysis of correlation and regression adopted) to process data and through Minitab software.

#### 1.6 Study Community and sample





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Mosul University and its colleges have been selected as one of the vital organizations with direct influence in the service of the community, as well as their need for strategic decisions and contribute to providing a high quality service that meets the needs and expectations of customers. The 45 heads of departments and units in this organization were selected as a research sample, as the forms were distributed to them and 39 forms were recovered with a recovery rate of 86% and are valid for analysis.

#### 2 Theoretical Framework.

#### 2.1 The Concept and Importance of Organizational Capabilities.

organizational capabilities are preparations the organization uses to perform a certain task (Xinhua & YU, 2008:338 (.

In to shed more light on the term *capabilities*, it it's important to determine what it is and what it is not by clarify the difference between capabilities and other close terms. The difference between resources and capabilities is explained by (Al-Maadhidi , 2008 :1) stating that resources are a group of factors owned or controlled by the organization, while capabilities are a set of skills used to mobilize and coordinate those resources in a manner that ensures that they cannot be imitated or copied by competition and therefore ensures the survival of the organization and its adaptation to its environment. (Peppard & Ward, 2004 :182) consider *resources* as what the organization owns and what is under its control or disposal, while *competencies* are the organization's ability to develop, mobilize and use those resources, and a *capability* represents what can be achieved through investment and dissemination of competencies. (Yin & Yang, 2011 :11) add that information systems rely on the capabilities provided by resources as competitors may be able to easily imitate investment in (IT) resources by purchasing the same hardware and software, but the resources in themselves do not provide sustainable competitive advantages.

In the same context, (Ravarini, 2010:83) clarifies the difference between *skills* that mean abilities at the individual level which ,through some processes, can be integrated into *competencies* which means capabilities at the organizational level. The term Processes refers to the allocation of resources that convert sets of *competencies* into *capabilities* which mean business-level capabilities. Figure 1 illustrates the aforementioned concepts.



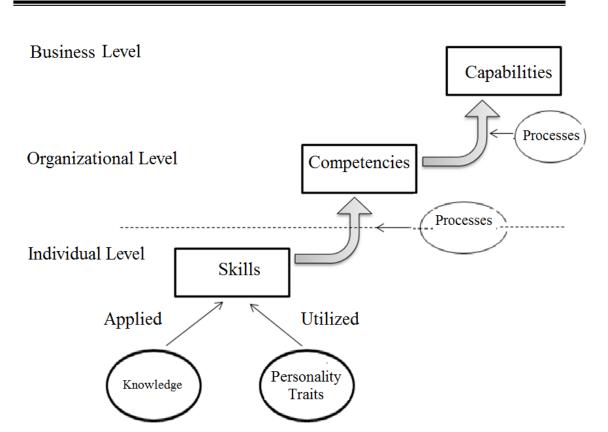


Figure (1)

### The Relationship between Capabilities, Competencies and Skills

Source: Ravarini, Aurelio, (2010), Information Technology Capability within Small-Medium Enterprises, Doctor Thesis, College of Computer and Security Science, Edith Cowan University, Australia, p.83

#### 2.2 The Concept of (IT) Capabilities and their Importance

Information technology (IT) and its importance, especially related to its capabilities, is a broad issue. The third millennium created the concept of competitive advantage and obtaining it was, and still is ,the main concern of the management of organizations. In order to shed light on the concept of (IT) capabilities a reviewing of a number of its pertinent concepts is in order.

(Ravarini, 2010:87) regards (IT) capabilities as capabilities spread throughout the organization and are utilized to plan, use, and manage resources based on (IT), integrated with other organizational resources and capabilities, to achieve a specific organizational objective and to gain a sustainable competitive advantage over competitors.

(Tian et.al., 2010:241) indicated that (IT) capabilities are high-performance organizational processes related to the acquisition, identification and utilization of (IT) assets (i.e., technical and human assets). (Xiaobo et. al., 2010:126) defines (IT) capabilities as the capability of an (IT) department to provide large scale (IT) infrastructure services that support the business operations of the organization, while (Naoui and Dif, 2011:3) regard it as a set of skills used to mobilize and coordinate (IT) resources to ensure their inimitability by other organizations and thus ensuring the organization's survival and adaptation to its environment.

The long-term survival of small and medium-sized organizations is linked to the capabilities of its information technology as opinioned by (Lester & Tran, 2008:75), who

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explained that (IT) capabilities provide access to external knowledge and financial resources, and they create trust and legitimacy through the dissemination of information on a large scale, and promote social networking within the business environment.

Information technology capabilities contribute to the achieving of at least five business organizations goals, as follows (Turban et.al., 2006:5):

- Improving productivity by 51%.
- Reducing costs by 39%.
- Improving decision-making processes by 36%.
- Strengthening relationships with customers by 33%.
- Developing new strategic applications 33 percent.

# 2.3 Types of Information Technology Capabilities.

Multiple classifications of (IT) capabilities emerged, from researchers who categorized them as follows:

- Value, Competitive, and Dynamic Capabilities .
- Internal and External Capabilities.
- Administrative and Technical Capabilities
- Other classifications that we will clarify in detail later.

But what concerns us is that all of these capabilities are used within the framework of business organizations and their activities in order for these organizations to keep pace with the rapid and severe changes and developments in their environment at various competitive and global levels (Al-Anzi, 2008 : 17).

(Al-Maadhidi, 2008:6) indicates that no matter how different the researchers views differ in the classification of information and communication technology capabilities, there is one fact in common, which is that these capabilities are interrelated.

The Day (1994) is one of the first and oldest studies that classified (IT) capabilities into three areas:

- 1- Outside-In capabilities represented by external relations with customers, environmental monitoring and understanding the dynamics of the market.
- 2- Inside -out capabilities which are more internal focused by focusing on skills, technical capabilities, and (IT) infrastructure.
- 3- Measurement capabilities which focus on planning information systems, business partnerships and aligning information technology with the organization's strategy (Al-Anzi, 2008:22).

There is a disparity in the classification of information technology capabilities and there is an overlap in some of these types, so we will classify these types into four that can be considered main types based on our opinion that they are the basis for all types of (IT) capabilities, which were agreed upon by (Zhang, 2005) and (Al-Anzi, 2008:27) and (Al-Maadhidi, 2008:9) and these types are:

- 1. (IT) infrastructure capabilities.
- 2. Human resources capabilities for (IT).
- 3. (IT) relationship resources capabilities.
- 4. Dynamic (IT) capabilities

Below is a detailed review of each of these types.

#### 1. (IT) Infrastructure Capabilities.

Many organizations have put the development of an effective(IT) infrastructure among their major concerns in their (IT) management, as (IT) infrastructure provides a common foundation for (IT) ability to build business applications and is usually managed from a group of information systems. The main purpose of an (IT) infrastructure is to

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provide consistent and rapid information support throughout the organization to respond to dynamic challenges in markets (Zhang, 2005:15). The function of (IT) infrastructure is defined in terms of its scope and access, and while access is defined as the sectors that the organization can enter to and that can be associated with it, its extent contributes to determining the type of information that can be specifically shared. and automatic across different systems and services (Al-Anzi, 2008:28).

#### 2. Human Resource Capabilities for (IT).

Due to the fact that (IT) infrastructure can be easily purchased or copied by competitors, oftentimes researchers suggest that (IT) infrastructure is unlikely to serve by itself as a source of competitive advantage. This view regards the value of (IT) infrastructure through the impact of human resource (Yin & Yang, 2011:13). Information technology skills management can be discussed from three aspects, as follows: (Yin & Yang, 2011:14)

- 1. Information technology project management. Effective development and implementation of some large scale (IT) projects like (ERP and SCM) will ensure the realization of the organization's (IT) strategy. Examples of (IT) project management may include project planning, scheduling, and cost control.
- 2. Information systems operations management. Management of information systems operations has received great care by organization management. Effective management of Information systems can help reduce operating costs, and increase the utilization of information systems.
- 3. *Organization's specific knowledge*. This aspect refers to understanding (IT) in the organizational context and the specific business involved in (IT) use. This view represents a holistic view of the organization and current business processes..

Technological skills refer to the ability to design and develop effective information systems and efficiency in system analysis and design, infrastructure design, programming, etc. As these skills are subject to organizational learning dynamics and knowledge constraints, they are difficult to imitate, and thus can be used at the core of the strategic initiative to build an advantage for the organization (Ravarini, 2010:80).

#### 3.( IT ) Relationship Resources Capabilities.

These capabilities represent the valuable relationship between (IT) and business units in the organization for the purposes of achieving effective (IT) applications. The IT departments and other business units must share risks and responsibilities, and this requires trust and respect, and the ability to communicate, cooperate, and negotiate readily and effectively. Some indicator of a strong relationship between the management of information technology and business units in organizations includes the parties involved in (IT), the role of senior leadership in establishing (IT) priorities, and developing an understanding of the information technology users (Al-Maadhidi, 2008:10).

(IT) relationship resources are not confined to high levels of respect between the organization and key business partners, customers, suppliers and other external stakeholders but also as excellence in communication, coordination, and negotiation on both sides of the relationship as well as knowledge sharing of (IT) capabilities and business needs. (Zhang, 2005:15).

#### 4. Dynamic (IT) Capabilities

Despite the importance of the aforementioned (IT) capabilities, organizations face rapid and intensively changing environments fierce competition seek dynamic (IT) capabilities that may help them overcome the environmental threats and risks and seize the increasing environmental opportunities that arise from the dynamic nature of both (IT) and the competitive environment (Al-Anzi, 2008:34). Dynamic (IT) capabilities go beyond

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knowing how to choose and operate a technology, and it is the know-why behind the technology.

The concept of dynamic capabilities reflects the importance of renewing organizational capabilities to face environmental changes, which enables the organization, through its superior dynamic (IT) capabilities to respond quickly to environmental risks and direct opportunities, and then search for, acquire, absorb and use knowledge about resources, opportunities and methods to organize resources to exploit those opportunities arising from changes in demand, both in speed and diversity (Al-Maadhidi, 2008:11).

# 2.4: Types of Organizational Strategic Decisions and their Effectiveness

Changes and developments have become the norm required for organizational success depending on the extent of rationality in making strategic decisions, which are of great importance in determining their fate, Organizations need accurate information and high competencies, especially under conditions of uncertainty resulting from changes in the internal and external environment. (Ibrahim, 2012:247) indicates that the strategic decision in general is "a detailed and precise process of choosing between at least two strategic alternatives, which have the same or similar value. It is the logical result of strategic planning that deals with a huge amount of data and information and formulated to be a plan with a long-term impact on the organization and the future of its work (Al-Damy and Al-Masoudi, 2011:141). (Hamza, 2008:81) believes that the strategic decision is future oriented decision focused on achieving the organizations' goal by understanding how the decision-making process flows through it. This requires creative skills to be aware of the variables in internal and external environment. Strategic decision it is a long-term decision in its content. Strategic decisions are divided into several main types, which are as follows: (Al-Amin and Nabila, 2009:2)

- 1- Promising strategic decisions: These are the ones that can be taken when the changes and developments that will occur in the surrounding environmental conditions are known in terms of their direction and characteristics. These decisions are easy to make by choosing the alternative with the lowest cost and the greatest return and base on the stage of exploration of alternatives.
- 2- Conditional strategic decisions (risk conditions): They are strategic decisions that are taken in the event that changes are expected to a greater degree in terms of direction compared to characteristics due to the change and diversity of environmental conditions and its instability. This type of strategic decisions is divided into defensive and offensive decisions. The defensive decisions are taken when the organization prepares to face a highly expected change, while the offensive decisions are adopted by the organization when opportunities are available for seizing. Conditional strategic decisions are taken when information is partial or incomplete for the decision maker. The decision maker who lacks sufficient ability to control the circumstances, but has the ability to decrease and increase the number of alternatives.
- 3- Strategic decisions in response to unexpected circumstances (uncertain circumstances): These are the decisions taken by the organization to face sudden unexpected circumstances or unknown in terms of direction and characteristics. In this case it is necessary for the organization to take responsive and quick decisions to face such circumstances.
- 4- Strategic decisions for competition:
- Making a decision in one organization is related to making a decision for another organization.
- 5- Strategic decisions for the marketing mix: These are decisions that pertain to the 4Ps of the marketing mix, namely product, price, place and promotion.



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The effectiveness of the strategic decision is a subject of debate and controversy. The effective decision refers to achieving the goals that the organization seeks to achieve, and it can achieve the acceptable level of proportionality between its means and its goal within certain circumstantial data.

# Factors affecting strategic decision making.

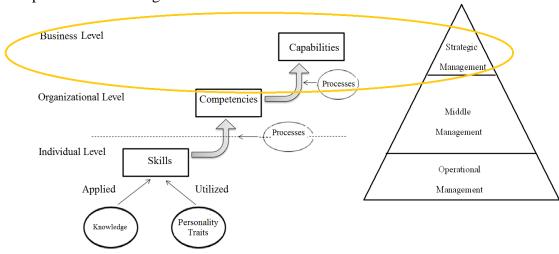
It is known that strategic decision-making in the organization is affected by a wide range of factors, which were summarized by Mintzberg as follows (Idres & Al-Ghaliby, 2007:145):

- 1. Power and politics: The ability of managers to make and take strategic decisions in the organization is affected by the nature of the exercise of power and authority between managers and other parties that are directly and indirectly related to the existence of the organization.
- 2. External control: It appears in the nature of relations with external groups and the extent of influence exercised by these parties on decision-makers and decision-takers.
- 3. Administrative characteristics: The personal and value characteristics of the decision-maker affect his decision-making process. The decision maker may be amateur, and thus more inclined to take risky decisions while a manager as a decision maker is less inclined to risk. Personal characteristics such as specialization and experience also affect the decision-making process.

# The relationship Between (IT) Capabilities and Strategic Decision-Making.

The Organizations' pursuit of (IT) and the acquisition of their various capabilities results from their recognition of the role technology and most importantly its strategic role. The strategic role of technology combined with (IT) capabilities help achieve a set of strategic advantages and gains that revolve around strategic decision-making and internal and external communications as well as aiding in horizontal and vertical organizational integration (Al-Anzi, 2008:7).

It seems clear that the four types of (IT) capabilities, (infrastructure capabilities, human resources capabilities, relationship resources capabilities and dynamic capabilities), have a significant impact on the strategic management of the organization and thus affect the decisions it takes. From figure (2) we can observe that both capabilities and strategic decision works coexist in the business environment, and this is what makes us emphasize the relationship based on the integration between the two variables.





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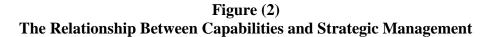


Figure (2) shows a clear relationship between the two investigated subjects and the common factor for both variables is the work environment, which as (strategic management takes place at the highest administrative level in the organization at the business level while capabilities work at the business level in the same environment.

#### 3. Analysis

This section presents a description and identification of the research variables for analysis. The analysis was performed using the Minitab software and its tools including frequency distributions, percentages, arithmetic means and standard deviations, and for each of the variables besides the analysis of the impact of (IT) capabilities on strategic decision.

#### 3.1 Description and Identification of Research Variables.

### First: Description and identification the (IT) capabilities.

The data in Table (1) concerning the (IT) capabilities variable through its indicators (X1-X28) indicates a (54.395%) agreement and (7.691%) disagreement among the answers of respondents while (39.376%) of the answers of respondents where neutral and all responses have an arithmetic mean of (2.4707) and a standard deviation of (0.6128). There are several indicators that contributed to the positivity of the (IT) capabilities variable, the most important of which are the indicators (X2,X7,X6,X13), which obtained the highest agreement (66.67%) supported by the mean value (2.59) and with a standard deviation (0.63). As for the indicator (X28), it obtained the lowest agreement by (35.90%) supported by the arithmetic mean (2.30) and standard deviation (0.56).

Table (1) Frequency Distributions, Percentages, Arithmetic Means, and Standard Deviations of (IT) Capabilities

Standard Deviations of (IT) Capabilities									
<b>pabilities</b> IT Ca									
	Agree		Neutral		dis	sagree		C4 J	
	T	%	T	%	T	%	mean	St. dev.	
Infrastructure									
Capabilities									
X1	20	51.28	11	28.21	8	20.51	2.3	0.8	
<b>X2</b>	26	66.67	10	25.64	3	7.69	2.59	0.63	
X3	23	58.97	15	38.46	1	2.56	2.56	0.55	
X4	18	46.15	19	48.72	2	5.13	2.41	0.59	
X5	18	46.15	14	35.9	7	17.95	2.28	0.75	
<b>X</b> 6	23	58.97	13	33.3	3	7.69	2.51	0.64	
Human Resource									
capabilities									
X7	26	66.67	13	33.3	0	0	2.66	0.47	
X8	26	66.67	11	28.21	2	5.13	2.61	0.59	
X9	21	53.85	16	41.03	2	5.13	2.48	0.60	
X10	20	51.28	17	43.59	2	5.13	2.46	0.60	
X11	18	46.15	18	46.15	3	7.69	2.38	0.63	
Relationship									
Resource									
capabilities									
X12	21	53.85	17	43.59	1	2.56	2.51	0.55	





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X13	26	66.67	10	25.64	3	7.69	2.59	0.63
X14	24	61.54	14	53.90	1	2.56	2.58	0.54
X15	24	61.54	15	38.46	0	0	2.61	0.49
X16	23	58.97	14	35.9	2	5.13	2.53	0.60
X17	21	53.85	18	46.15	0	0	2.53	0.50
X18	21	53.85	15	38.46	3	7.69	2.46	0.64
X19	24	61.54	12	30.77	3	7.69	2.53	0.64
Dynamic capacity								
X20	21	53.85	16	41.03	2	5.13	2.48	0.60
X21	20	51.28	13	33.3	6	15.38	2.35	0.74
X22	23	58.97	11	28.21	5	12.82	2.46	0.72
X23	19	48.72	17	43.59	3	7.69	2.41	0.63
X24	19	48.72	18	46.15	2	5.13	2.43	0.59
X25	20	51.28	15	38.46	4	10.26	2.41	0.67
X26	17	43.59	19	48.72	3	7.69	2.35	0.62
X27	18	46.15	19	48.72	2	5.13	2.41	0.59
X28	14	35.90	23	58.97	2	5.13	2.30	0.56
Overall Index	54	.395	39	.376	7	.691	2.4707	0.6128
			•			•	•	

Source: Prepared by researchers based on computer results

#### Second: Description and identification the strategic decision variable.

The data in Table (2) concerning the strategic decision variable through its indicators (X29-X36) indicates a (54.806%) agreement and (9.933%) disagreement among the answers of respondents while (35.257%) of the answers of respondents where neutral and all responses have an arithmetic mean of (2.442) and a standard deviation of (0.645). There are several indicators that contributed to the positivity of the strategic decision variable, the most important of which is the indicator (X36) which obtained the highest agreement percentage (76.92%), with a mean of (2.71) and a standard deviation of (0.55). As for the indicator (X34) it obtained the lowest agreement percentage (38.46%).) with a mean of (2.25) and a standard deviation of (0.67).

Table (2) Frequency Distributions, Percentages, Arithmetic Means, and Standard Deviations of Strategic Decision

Standard Deviations of Strategic Decision									
Strategic Decision									
	Agree		Ne	Neutral		sagree	****	C4 dow	
	T	%	T	%	T	%	mean	St. dev.	
X29	20	51.28	14	35.9	5	12.82	2.38	0.71	
X30	22	56.41	16	41.03	1	2.56	2.53	0.55	
X31	26	66.67	12	30.77	1	2.56	2.64	0.53	
X32	18	46.15	13	33.33	8	20.51	2.25	0.78	
X33	18	46.15	15	38.46	6	15.38	2.30	0.73	
X34	15	38.46	19	48.72	5	12.82	2.25	0.67	
X35	22	56.41	14	35.9	3	7.69	2.48	0.64	
X36	30	76.92	7	17.95	2	5.13	2.71	0.55	
Overall Index	54	1.806	35.257		9.933		2.442	0.645	

Source: Prepared by researchers based on computer results



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#### Third: the correlation analysis

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In order to achieve the requirements of the research and testing its hypothesis, we investigated the nature of the relationship between the (IT) capabilities and the strategic decision. It appears from Table (4) and through the overall indicator that there is a positive significant correlation between the (IT) capabilities and the strategic decision, as the value of the correlation coefficient was (0.579), which indicates a fit between the (IT) capabilities and strategic decision in the investigated organization.

Table (3) The results of the correlation relationship between (IT) capabilities and strategic decision in the investigated organization

Independent variable The dependent variable	(IT) capabilities
strategic decision	( 0. 579 ) **

<sup>\*\*</sup> Significant at level 0.05 df(1,37) N = 39

In order to clarify the relationship between the dimensions of IT capabilities and the strategic decision, we present Table (4). Accordingly, it rejects the hypotheses (H1-1, H1-2, H1-3, H1-4) and accepts the alternative hypotheses, which state that there is a positive correlation between the dimensions of information technology capabilities and the strategic decision.

Table (4) The results of the correlation relationship between the dimensions of IT) capabilities and strategic decision)

Independent Var	Dependent Variable	Strategic Decision
	Infrastructure Capabilities	0.418
IT Canabilities	Human resource capabilities	0.5486
IT Capabilities	Relationship resource capabilities	0.6
	Dynamic capacity	0.591

N = 39P <= 0.05df = (3, 34)

Fourth: Presentation and analysis of the impact of (IT) capabilities on the strategic decision

The results of the regression analysis shown in table (5) indicate that there is an impact of (IT) capabilities on the strategic decision, as the calculated (F) value reached (4.33) which is greater than its tabular value of (2.03) at the level of significance (0.05) and two degrees of freedom of (1,37), while the value of the coefficient of determination (R<sup>2</sup>) was (33.6%). This means that the (IT) capabilities contributed to, and explained, (33.6%) of the variance in the strategic decision while (66.4%) of the variables are random and cannot be controlled or are not part of the research model. By following the coefficients of (β) and (T) test, it was found that the calculated (T) value reached (4.33) which are greater than its tabular value of (2.03) at the level of significance (0.05) and two degrees of freedom (1.37). With this result, the alternate hypothesis is accepted while the null hypothesis that there is no impact relationship between IT capabilities and strategic decision is rejected.





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Table (5) The Results of the Impact of Information Technology Capabilities on Strategic Decision at the Macro Level

Dependent variable		Strategic Decision  Strategic Decision						
		T		F				
Independent variable	$\beta_1$	Calculated		R <sup>2</sup>	Calculated			
(IT) Capabilities	0.64	4.33	2.03	%33.6	18.73	4.12		

N = 39  $P \le 0.05$  df = (1,37)

Source: Prepared by researchers in light of the results of the software. Minitab

In order to clarify the impact of the dimensions of information technology capabilities on the strategic decision and in light of the hypotheses, Table (6) shows the results of the impact of the dimensions of information technology capabilities on the strategic decision, as follows:

Table (6) The Results of the Impact of IT Capabilities on Strategic Decision at the Micro Level

Dependent variable  Dependent variable		Strategic Decision						
		Т			R²	F		
		β <sub>1</sub>	Calculated		Calculated			
	Infrastructure	0.4260	2.80	1.69	17.5%	7.83	2.88	
(IT) Capabilities	Human resource	0.4338	3.99		30.1%	15.95		
	Relationship resource	0.5947	4.57		36.1%	20.87		
	Dynamic	0.4898	4.46		35.0%	19.89		

N =39 P <= 0.05 df= (3,34)

Accordingly, we rejects the hypotheses (H2-1, H2-2, H2-3, H2-4) and accepts the alternative hypotheses that state that there is an impact of the dimensions of information technology capabilities on the strategic decision.

#### 4: Conclusions and Recommendations

#### 4.1Conclusions

This section includes a summary of the theoretical and field aspects of the study expressed in the form of conclusions related in one part to the theoretical aspect, while the other part concerns the applied conclusions based on the results of statistical analysis.

#### First. Theoretical conclusions

- 1. The concept of (IT) capabilities is still recent and amorphous in investigated organization, despite its importance in revealing the level of performance experienced by those organizations.
- 2. In order to make great use of (IT) as an organizational resource, care is directed towards transforming those resources into capabilities that accumulate over time through organizational learning, experience, relationships, and knowledge, so that organizations can have the ability to generate competitive actions within the framework of the digital





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economy that qualifies them to confront environmental threats that threaten organizations on the one hand and enable them to achieve breakthrough innovations that enable them to achieve profits above the industry average level on the other hand, within the framework of what is known as strategic innovation.

- 3. The study found a great difference in the opinions of researchers when determining the types of (IT) capabilities in terms of their sub-dimensions.
- 4. The study found that there are those who consider human resource as one of the components of information technology even though they are resources in themselves and not a component.

#### Second. Conclusions based on the results of statistical analysis

- 1. The results of the analyses reflect what the study sees as the strength of the theoretical side that it presented regarding the relationship and influence between the two variables.
- 3. The vast majority of employees in the (IT) department hold university degrees and postgraduate degrees (bachelor, higher diploma, and master degrees), and most of them are specialized in software which are specializations that are compatible with work in the field of (IT). This suggests an increase in the efficiency of that organization in exploiting its resources.
- 4. The data concerning the dimensions of the study and its variables, in addition to their description and diagnosis indicates that the investigated organization pays great attention to its human resources, which provides great capabilities that help the organization in acquiring the technological capabilities.
- 5. In the analysis of the direct correlation, the study found that there is a proportional impact between the variables of the study, that is, an increase in (IT) capabilities of the investigate organization leads to rational strategic decision-making.
- 6. The analysis of the impact relationship between the dimensions of the study and its variables showed that the capabilities of information technology have a significant impact on the strategic decision.

Third. The field experience of the researchers of the investigated organization resulted in the following:

- 1. An organization of this size with its great responsibilities needs to search for more greater (IT) capacities than it currently has .
- 2. The study found that the human resource in the investigated organization has good (IT) capabilities despite the lack of resources.
- 3. The study found that there is insufficient support from the senior management of the (IT) Division in the department.

#### **Recommendations**

Based on the conclusions, it was decided that this topic should be devoted to presenting a set of recommendation to complement this modest research effort, as follows:

- 1. The idea of enhancing (IT)capabilities of information technology must be supported by words and acts of the senior leadership at the University of Mosul.
- 2. it is important to transform human resource skills and organizational competence into capabilities that aid the organization in achieving its goals.
- 3. Since the majority of (IT) personnel in the investigated organization carry a university education degree, the senior management must take advantage of this advantage to obtain its required capabilities.
- 4. It is important that the investigated organization pays attention to the skills and development of its human resources working in the field of (IT), which requires continuous HR planning for its (IT) qualified personals that can provide innovative solutions for overcoming the problems and seizing the opportunities in the organizational environment.



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