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KNOWLEDGE MANAGEMENT INFRASTRUCTURE AND ITS ROLE IN ACHIEVING CYBER MARKETING: AN ANALYTICAL STUDY OF THE OPINIONS OF A SAMPLE OF EMPLOYEES IN THE TWO MOBILE TELECOMMUNICATIONS COMPANIES, ZAIN AND ASIA CELL, IN IRAQ

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Key Words: Knowledge Management Infrastructure, Cyber Marketing.

ABSTRACT

The current research seeks to identify the role of knowledge management infrastructure as an independent variable across its dimensions. (Technological, cultural and structural infrastructure), in cyber marketing as a dependent variable, in the two companies Zain and Asia cell for mobile communications in Iraq. The research sample included (150) individuals working in the two companies, and for the purpose of achieving the goal of the research, the questionnaire was adopted to collect data related to the research variables, and the descriptive analytical approach was adopted in the research and then analyzed by adopting some statistical methods such as (arithmetic mean, standard deviation, and coefficient of Linear correlation, simple and multiple regression coefficient), and the results were reached using the statistical program such as (SPSS.V.24) and the program (Amos.V.24) to analyze the data to reach conclusions, the most prominent of which was the existence of a correlation and impact relationship between the infrastructure of knowledge management and marketing Cyber.

INTRODUCTION

Facing challenges, developments, and rapid and successive fluctuations, in addition to severe competition in the business environment, requires a new

approach to work that responds and keeps pace with those challenges, as knowledge and its applications are among the most prominent challenges of the current century, as business organizations seek to capture and collect valuable information and use it in various activities and operations, and in order to Providing the appropriate environment for the organization so that it can manage knowledge effectively and efficiently and protect that knowledge. It is necessary to develop an integrated organizational infrastructure that includes dimensions related to the technological, cultural and structural infrastructure. In light of the cyber revolution that spawned cyber marketing, which began to enter homes and the minds of individuals without permission, so the importance of marketing has increased in the current era because of these developments that have taken place. Marketing physical products and some researchers believe that marketing is those efforts aimed at T is looking for innovative, new and radical marketing forms and models.

METHODOLOGY

First: Research Problem

Knowledge management is a modern or inevitable administrative trend that requires contemporary organizations to apply knowledge and technology management in order to achieve their organizational goals with better returns and lower costs in light of the great developments of information technology due to the knowledge values it provides, but the matter is related to the ability to exploit this information in creating the required knowledge. And storing, distributing and developing it continuously to raise the level of the organization's performance and its role in society. Therefore, the lack of sufficient knowledge of the dimensions of the knowledge management infrastructure, and the sufficiency of many studies and research to study the various knowledge management processes on the performance of organizations.

This is what this research attempts to address by answering the following question: (What is the role of knowledge management infrastructure in achieving cyber marketing), and the following sub-questions emerge from it:

1- Is there a correlation and impact of the knowledge management infrastructure and the achievement of cyber marketing?
2-What is the importance of the knowledge management infrastructure for the telecommunications company, the research sample?
3-Does the company under study have knowledge of the nature of cyber marketing?

Second: Importance of Research

This study acquires importance by touching on a vital topic that helps the researched organizations to enhance their position, raise their value and control their various operations and activities. Including to lead the organization and its members and its various interests, and help to develop creative capabilities and achieve the desired goals, in addition, this study

highlights the importance of cyber marketing, especially in the digital environment and technology as one of the modern vital topics that studies try to provide the solutions necessary to achieve it as a vital element that should be taken into account in all its aspects.

Third: Research Objectives

1-Detection of the level of availability of dimensions of knowledge management infrastructure (infrastructure for technological knowledge management, infrastructure for structural knowledge management and infrastructure for cultural knowledge management) in the study sample organizations.
2-Identifying the level of the dimensions of cyber marketing (cyber attraction, cyber interaction, cyber retention, cyber learning, cyber communication) in the study sample organizations.
3-Identifying the nature of the correlation and influence between the knowledge management infrastructure and cyber marketing in the study community organizations.

Fourth: Hypotheses

A- The first main hypothesis: **There is a positive, significant correlation between the infrastructure of knowledge management and cyber marketing**.
B - The first main hypothesis: **There is a significant effect relationship between the infrastructure of knowledge management and cyber marketing**.

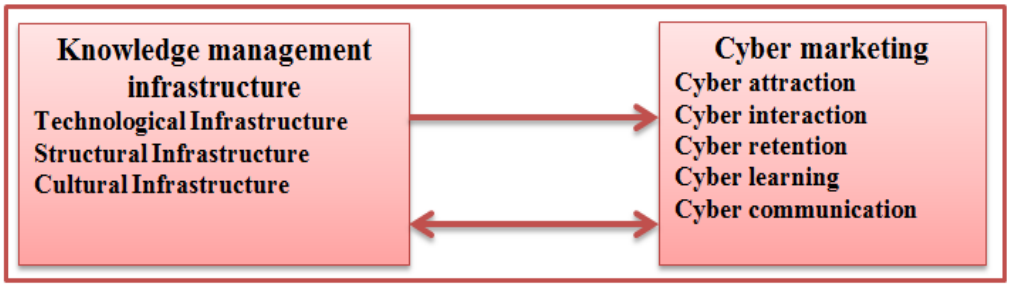

Figure (1) The hypothesis of the study

Fifth: Materials and Methods

We relied on the questionnaire to obtain data from the practical side. The questionnaire in its final form included three parts, the first part of which dealt with the information of the individuals on whom the research was conducted, while the second part included questions of the infrastructure for knowledge management and its preparation was based on the random sample. and the third includes cyber marketing metrics.

Sixth: Research Sample

The study was applied to a sample of workers in the telecom companies Zain Iraq and Asia cell in Iraq, whose number reached (150), and the random sampling method was adopted in order to collect the necessary data.

LITERATURE REVIEW

First: Knowledge Management Infrastructure

The knowledge management infrastructure is the backbone of knowledge management, as every successful organization that applies knowledge management realizes the need and importance of a clear and supportive infrastructure to assist knowledge management practices, and then the effective application of knowledge management requires a strong and appropriate infrastructure for knowledge management, and it is clear that managing knowledge is more than just a technological toolkit, although technology is an integral part of knowledge management, and the availability of certain technologies plays an effective role in stimulating the knowledge management movement (Zaim et al., 2007:55). The researchers took care of the knowledge management by identifying their requirements, by paying attention to the necessary infrastructure for the sound management of knowledge, with a number of specialists who tried to identify such supplies as the need to provide an infrastructure to build successful knowledge management, and one of the most important focused is the presence of a technical structure and add management Knowledge of technology support skills, creating database integration, a broad knowledge structure, and focusing on an organizational culture that encourages the availability of ways to manage knowledge (Imran, 2014: 86). It is a necessary tool to preserve the actual and valuable explicit and tacit knowledge in the organizational network (Aviv, 2021:5). It is also a means used by organizations to respond quickly to the complexities of a rapidly changing environment, which becomes a critical factor that intensifies organizational efficiency by shortening the time required to develop competencies (Mathur, 2021:94).

In the past, knowledge was viewed as a primary source for achieving immediate competitive advantage, and this perspective evolved to look at knowledge from a strategic perspective as a key factor for innovation and creativity processes and rapid and rapid development resulting from being a mixture of talents, rules, ideas and procedures that lead actions and decisions. It provides effective and useful information in the form The right and appropriate time and the right place for decision-making (Obeidat et al., 2015:314). In general, knowledge is divided into essential knowledge that represents the lowest meaning of knowledge that is used in sustaining industrial processes and their various applications, advanced knowledge that represents additional knowledge that characterizes an entity over its competitors or what leads it to a superior competitive position, and creative knowledge that enables the organization to lead its sector in a unique way. Its knowledge of its competitors within that sector (Abualoush et al., 2018: 280).

Second: Dimensions of Knowledge Management Infrastructure

Infrastructure Technology

It is the structure based on technological links that helps link information and communication systems in the organization, thus eliminating barriers to communication and knowledge interaction. Accordingly, this structure must be supportive of at least different and important types of knowledge and communication systems (Nguyen, 2010:49). The technological knowledge management infrastructure aims to facilitate the implementation of the main tasks that workers in the field of knowledge must perform, as the technological knowledge management can enhance these basic tasks by providing speed, quality and cost reduction (Ng, 2012: 210).

Structured Infrastructure

The organizational structure works to the formal division of employment functions and administrative mechanisms to keep pace with work activities and their integration, as it is the formal distribution of work tasks, roles, responsibilities and powers that exist within the organization, including policies, procedures, hierarchical relationships, sector boundaries, and others (Nguyen, 2010:49). The organizational structure plays an important role in strengthening technology and communication networks and facilitating cooperation and knowledge exchange in organizations (Ng, 2012: 210).

Infrastructure Cultural

Organizational culture refers to a purposeful system maintained by members of the organization that distinguishes the organization from other organizations, and is the characteristics of the values, traditions, and behaviors common to the employees of the company (Nguyen, 2010:49). Organizational culture is defined as the combination of rules, standards, values, assumptions and beliefs that employees have within the organization, and affect the way they think and make decisions. Infrastructure for knowledge management and innovation (Tsetim et al.,2020:217).

Third: Cyber Marketing

Cyber marketing is the fastest growing and most in-demand branch of marketing today, as the world is becoming a small place, keeping up with developments and trends is vital for marketers trying to reach new customers, who are more concerned with less confidence in trading companies, as products are constantly evolving and adapting to the market cybernetic, and marketers attempt to harness the power of the Internet for their own needs (Roberts et al., 2012:3). (Widowati et al., 2013:2) indicated that it is the marketing that takes place by using the computer with the Internet to promote or advertise products and services in the target market sector, and that the world of cyber marketing is huge and has no limits, as this virtual world reaches all A human being on earth through a telephone connection and the Internet.

And (WU, 2016:14) that cyber marketing is intended for small companies, and it is a method to attract the customer towards products, with the help of cyber marketing, we can promote our product via the Internet, and cyber marketing also allows organizations to target specific products, and in general cyber marketing uses emails and websites electronic banners, SMS and newspapers to promote a product. The entire concept of cyber marketing is based on the marketing of products or services online through various methods such as display advertising, search engine marketing campaign, blogging marketing, content marketing, viral marketing, creating videos of people using a product, social media and email marketing. Traditional Marketing E-marketing is fairly inexpensive and provides an opportunity to reach a group of customers who use a computer (Geiger, 2015:11). It is a new type of marketing that involves the use of traditional and innovative online tools and techniques to determine customer satisfaction through exchange for profit and other advantages of the manufacturing organization (Rosiana et al., 2021:129). It is also a set of standard marketing activities designed over the Internet, the main purpose of which is to obtain maximum impact from the potential audience on the site (Budacia& Busuioc, 2021:43).

Fourthly: The Dimensions of Cyber Marketing

Cyber Attraction

It is the basis of consumer interaction as it requires them to voluntarily visit its interactive application (visiting the website) and includes: attracting customers to the application, creating an audience, keeping the brand in memory, and paying attention to advertisements, and marketers can attract customers through advertisements on sites and advertising windows or links with Relevance (Chong et al., 2010:20). Other companies may resort to using methods of attraction through the organization's association with a group of charitable works or loyalty programs for customers or the production of environmentally friendly products for the purpose of attraction (Teo, 2005: 205; Kian, 2011: 12).

Cyber Interaction

It is sometimes called content marketing, which is seen as the interaction of users in participation, interest, achieving interaction or completing actions or business, and interaction is a key factor in creating demand and includes: generating interest and interaction, programming creatively, interactive content, use of the resulting content, and practical capabilities (Chan et al., 2011: 8). In the interaction stage, many cyber marketing applications collapse in a short period of time or are poor in content or poorly presented, while other applications may be very sophisticated with high-definition graphics and impact, making the customer more attentive (Teo, 2005: 205).

Cyber Retention

It is to provide appropriate and interactive content of value in order to develop relations with customers and includes ensuring the return of customers and

providing distinctive dynamic content. The aspect of organizations is to develop the relationship and contact them on an ongoing basis, which requires engaging with customers, understanding their needs, and believing that the customer will return again (Teo, 2005: 205). Retention also requires advertising using cyber marketing platforms and electronic search engines to promote the elements of the cyber marketing mix (product, distribution, promotion, pricing, operations, human factor, physical facilities, productivity and quality), and this requires continuous renewal of the content provided to them or providing content that is variable but continuously interactive (Habibi et al., 2015:2).

Cyber Learning

It is a method used by marketers through interactive means of communication to obtain more data related to customers (attitudes, behaviors, attitudes, and demographic information) through surveys and questionnaires (Teo, 2005: 205). Cyber-learning includes preferences, information capture, continuous preference, and learning. Behavioral information can be extracted from customer records in electronic files or from computer mouse click records. Most companies support a chat system to solicit interactions and discussions for the purpose of knowing customers' purchasing preferences (Habibi et al., 2015:2).

Cyber Communication

It is a marketing opportunity to customize interaction and focus it on a target market to learn more about the consumer and includes: Personalizing communication, personal communication, and on-demand communication (Teo,2005:205). (Chan et al., 2011:8) believes that communication is one of the most important value creation opportunities in cyber marketing, as it is more appropriate to allocate the interaction between the service provided and the time and marketing effort for more than one customer at the same time. for one customer.

The Practical Aspect of Research

First: - Statistical Description

This topic relates to presenting the results of the descriptive analysis of the responses of the research sample about the availability of research variables and its dimensions in the two telecom companies Zain and Asia Seal for the research sample, and it included all aspects of a presentation of the arithmetic averages of the questionnaire paragraphs, their standard deviations, the level of the answer, the intensity of the answer, and the ordinal importance. The level of the answers was determined in light of the arithmetic averages by determining their affiliation to any category. And because the research questionnaire depends on the five-point Likert.

Knowledge Management Infrastructure

This paragraph relates to the description of the knowledge management infrastructure variable through its three basic dimensions, as follows:

In light of the presentation that came above regarding the statistical description of the dimensions of the infrastructure for knowledge management, it can be said that the first dimension, the technological infrastructure, was at a high level, and it ranked first among the dimensions, followed by the structural infrastructure dimension, which came at a moderate level. As for the third rank, it was the share of the infrastructure dimension The cultural level is also moderate, and we can summarize the levels of these sub-dimensions in the light of the following table and figure:

Table (1) Arithmetic averages, standard deviations, and dimensional order of the knowledge management infrastructure variable

dimension	**Mean**	**Standard deviation**	**answer level**	**Order of importance**
technology infrastructure	3.44	0.675	High	1
cultural infrastructure	3.15	0.784	mild	3
structural infrastructure	3.23	0.722	mild	2
General Average	**3.273**	**0.727**	**mild**	

In general, the general arithmetic mean of a variable for the dimensions of the knowledge management infrastructure was high (3.273), with a general standard deviation of (0.727).

Cyber Marketing

In light of the presentation that came above regarding the statistical description of the dimensions of cyber marketing, it can be said that the first dimension of cyber-attraction was at a moderate level, and it ranked first among the dimensions, followed by cyber-learning, which came at a moderate level. The fourth rank was for cybernetic interaction and also came at a moderate level and finally came after the cybernetic retention of the last rank and at a moderate level. We can summarize the levels of these sub-dimensions in the light of the following table and figure.

Table (2) Arithmetic averages, standard deviations, and dimensional order of the cyber marketing variable

dimension	**Mean**	**Standard deviation**	**answer level**	**Order of importance**
cyber attraction	3.33	0.615	**mild**	1
cybernetic interaction	3.30	0.630	**mild**	4
cybernetic retention	3.25	0.745	**mild**	5
cyber learning	3.33	0.693	**mild**	2
cyber communication	3.31	0.595	**mild**	3
General Average	3.30	0.517	mild	

In general, the general arithmetic mean of the cyber-marketing variable was moderate, with a general arithmetic mean of (3.30) and a general standard deviation of (0.517).

Hypothesis Test

First, The Correlation Hypotheses

The first main hypothesis: (**there is a statistically significant correlation between the infrastructure of knowledge management and cyber marketing**)

In order to accept the first main hypothesis above from not accepting it, the researcher tested the value of the simple correlation coefficient using the (Sig. 2-tailed) test to determine the significance of the relationship between the (independent) knowledge management infrastructure variable and the cyber-marketing variable, as the table (3) indicates the existence of a relationship A statistically significant correlation between the knowledge management infrastructure variable and the cyber marketing variable, as the value of the simple correlation coefficient between them was (0.793**) and this value indicates a strong and positive relationship between the knowledge management infrastructure variable and the cyber marketing variable, and what supports this is a significant relationship The correlation that appeared at the level of significance (1%) and with a confidence degree of (99%), and Table (3) shows that relationship, as it is clear that the first main hypothesis is accepted, which states that (there is a statistically significant correlation between the infrastructure of knowledge management and cyber marketing) . At the level of significance (1%), that is, the outcome of the decision is acceptable with a confidence level of (99%).

Table (3) Pearson Correlation Matrix Cyber Marketing Knowledge Management Infrastructure

dependent variable	independent variable	technology infrastructure	cultural infrastructure	structural infrastructure	knowledge management infrastructure
cyber marketing	**Correlation**	.784**	.673**	.752**	.793**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	150	150	150	150

Second: Impact Hypotheses

The second main hypothesis: (**there is a statistically significant effect between the knowledge management infrastructure and cyber marketing**).

It is noted through the figure (2) which represents the structural model of the research that shows the independent variable (knowledge management infrastructure) and the dependent variable (cyber marketing). For the search data according to the matching criteria approved by (Hooper & et al), it can be noted that the chi-square was not significant, as it reached (2390.865) at a significance level of (0.093), which is greater than 0.05, as well as the root mean ratio of the residual squares RMR, which was found to be less From its criterion of (less than .08), it reached within the tested model (0.032). As for the one-way stocks from the independent variable to the dependent variable, they represent the standard regression coefficients, and the higher apparent value of the cyber-marketing variable represents the interpretation coefficient (the coefficient of determination), which is called With the standard transactions (R2), which show that the knowledge management infrastructure variable is able to explain 63% of the changes that occur in the cyber marketing variable in the communication company, while the remaining percentage (37%) is attributed to the They are other variables that are not included in the research model. As it can be seen from Table (6) that the value of the marginal slope coefficient (β) is (0.79). Increasing the levels of knowledge management infrastructure by one unit of standard deviations will lead to an increase in the levels of cyber marketing by (79%) from one standard deviation unit and based on the outputs of the structural model of the influence relationship between the independent variable and the approved variable, the first main hypothesis of the impact hypotheses is accepted. Figure (2) shows the tested structural model and regression trajectories.

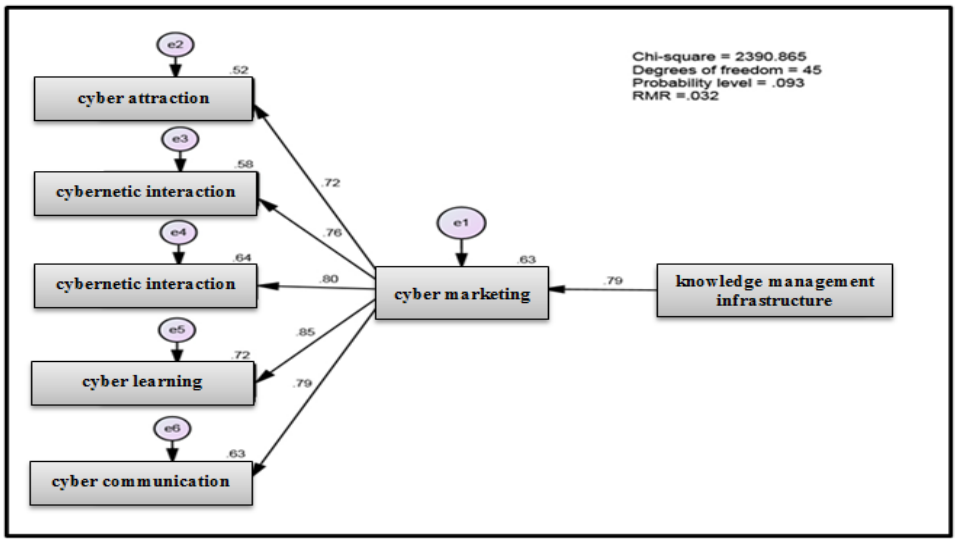

Figure (2)

The regression path of the first main hypothesis according to the structural equation modeling method the analysis summary table (4) also shows that the model estimates are significant because they are below the level of 0.05 (P<.05), as well as the critical ratio C.R. It is greater than (1.96) and it fulfills the required condition.

Table (4) Impact model estimates between the knowledge management infrastructure variable and cyber marketing

variable and dimensions	path	Variables	Squared Multiple Correlations	Standardized Regression Weights	S.E.	C.R.	P
Y	--->	X	0.628	0.794	0.033	24.186	***

CONCLUSIONS

The results of the analysis indicate that there is a direct correlation between the knowledge management infrastructure in its dimensions with cyber marketing, as the value of the simple correlation coefficient between them is (0.793**) and this value indicates the existence of a strong and positive relationship between the infrastructure variable for knowledge management and cyber marketing, and what supports This is the significance of the correlation relationship that appeared at the level of significance (1%) and with a confidence degree of (99%). The impact of the knowledge management infrastructure in its dimensions in cyber marketing was positive and moral, as real interest and finding quick solutions, providing the best services and maintaining a consistent and appropriate service process will lead to the formation of positive trends among customers. The top management of the surveyed communication companies also works to motivate internal customers to provide the best services to customers because the basis for providing good service starts from internal customers through employees of the surveyed companies. The lack of response to market reactions by marketing

departments in the surveyed communication companies to improve and innovate services Continuously in line with the actual market need.

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