422

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

The Relationship between Strategy and Information Systems and Their Impact on Achieving Sustainable Competitive Advantage in Supply Chain- A Survey Study on Samples from Iraqi Industrial Companies

Dr. Bilal .J. Al- Qaysi

Al- Rasheed University College, Baghdad, Iraq
dr.bilal_alkaisy@yahoo.com

Abstract- **Institutions are accelerating to achieve a sustainable competitive advantage in supply chain, its range is expanding to find the tools to help them achieve this purpose, and the growing need for these organizations to understand their current status as well as their potential. Therefore, organizations always depend on information systems to process transactions, develop products, access a large proportion of their budgets to support their operational and commercial activities, and how to acquire knowledge for business owners to access these investments. Wealth, naturally, includes an assessment of information technology and a link to business success and access to potential assets within existing innovation mechanisms primarily on the strategic emphasis of organizations in particular. The aim of this research is: to discuss the importance of integrating business strategy and information systems in the framework of achieving sustainable competitive advantage in supply chain and its impact on the sustainability of organizations and their endurance in a world of intense competition and rapid change. Design / Methodology / Approach: reviews and discusses existing literature of interrelationship and framing between business strategy, and customer relationship management systems (CRM) for related issues. Conceptual models are presented to clarify the interrelationship and impact between search streams. Results - the research finds a set of most important results is that if business organizations achieve a sustainable competitive advantage in supply chain, this requires them to match their own business strategy and information systems with the use of their resources and information and their compatibility with competitors' resources and capabilities in the context of competitive environment and how to maintain this feature which helps them achieve institutional distinction compared to their competitors. Practical fallouts: The main implications of practical fallouts revolve around the idea that "in today's intense competition markets, organizations must aim to seek sustainable competitive advantage in order to be competitive, and information systems will play a critical role in generating the necessary data that can through which organizations develop and implement business strategy, which in turn promotes the practice of success and achieve superiority at the business level.**

Keywords: *Strategy, Information Systems, Sustainable Competitive Advantage, Supply Chain.*

1. Introduction

Several changes have forced business organizations to reconsider their competitive priorities. The development of environmental concepts has become an urgent necessity. All marketing activities are changing. The survival and success of business organizations depends on what they offer to their customers. This requires an important strategy in thinking about what is beyond product delivery or rather on how to compete with the market or sector (part of the market) it serves in the industry. The progress in information technology is easy for organizations to collect an enormous amount of data about customers, which allows them to use it to show the performance of most of the goals, following the needs and requirements of customers according to a comprehensive view of all the area covered by their products and not on a single customer basis. In addition, the management of systems (information) will enable it to develop its own strategy and develop it by offering something that is difficult to imitate and characterized by sustainability and / or partnership, in the belief that the integration of resources will create a more competitive advantage in supply chain that can be created on its own and continue to maximize this value for the customer in all their forms and types.

Sustainability has become a goal for all organizations aspiring to create competitive advantages in their business environment. Sustainability is the most important source of strategic success and competitive

423

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

advantage in the selected market. The organization has a competitive advantage when its profit rate is higher than industry average and has a sustainable competitive advantage in supply chain when it has the ability to maintain its profit rate for a number of years, when it achieves high and steady profits. This gives the competitive advantage of the organization the ability to surpass at the performance of competitors in the industry who achieve a higher rate of profit than the normal rate and the real benefit of the organization of the advantages are that the competitors cannot imitate them and therefore, the competitive advantage must be embedded in depth and resources and skills and culture (ERP), Customer Relationship Management (CRM), Supply Chain Management (SCM), Business Intelligence (BI) and Knowledge Management (KM) systems.

2. Methodology of research
2.1. Research dilemma
The concept of sustainable competitive advantage in supply chain has become a concern for most business organizations in various fields and is becoming increasingly important in the third millennium due to the huge and rapid developments in the business environment, which have been characterized by great complexity and risk. In following the development paths of all organizations, most of its concerns are towards customers and other investors in order to maintain excellence. The current research attempts to define a new structural modeling between business strategy and information systems through evaluating the quality of the social structure and their impact in creating sustainability for competitive advantage. The research problem can be summarized by answering the following questions:
1) What methodology works to connect between business strategy and information systems?
2) What strategic methods can be linked to business organizations to be used?
3) How can business organizations achieve sustainable competitive advantage in supply chain?

2.2. Importance of Research:
Reversing the importance of research as follows: -
1) Review the methodology of research in a very modern subject including (business strategy) to achieve a conscious understanding of concepts and objectives.
2) Demonstrate the use of the link between business strategy and information systems through a set of clear practices, techniques and phases and stimulate business organizations to implement them in shaping their future and identifying ways to meet their challenges.
3) Highlight how to achieve sustainable competitive advantage in supply chain by business organizations.

2.3. Research Objectives:
Current research seeks to achieve the following objectives
1) Identifying the assets of strategic information systems in business organizations.
2) Methodology to identify conceptual linkages between business strategy and information systems.
3) Highlighting the role of the business strategy and its relation to information systems.
4) Identifying the concept of sustainable competitive and how to achieve and maintain it.
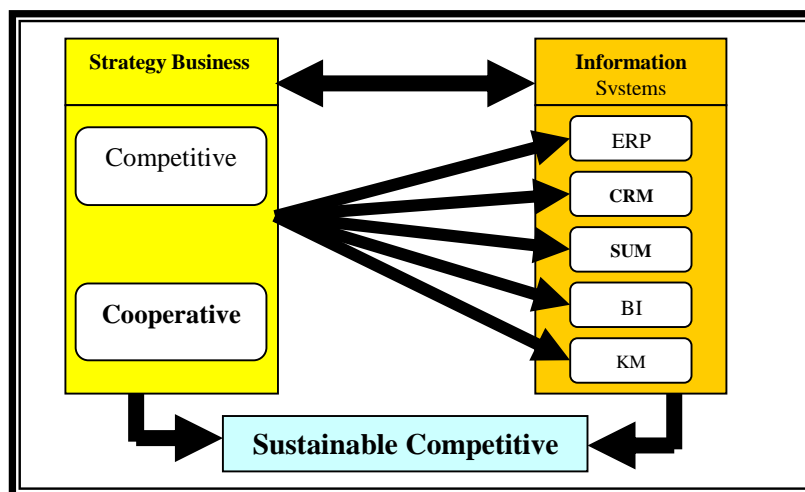
2.4. The research model:

Figure (1) hypothetical research model

2.5. Research hypotheses:
The first main hypothesis: (the absence of significant correlation between the dimensions of the work strategy and the dimensions of the information systems). This hypothesis is divided into seven sub-hypotheses:

1) There is no statistically significant correlation between the dimensions of the business strategy (competitive and cooperative) and after the Enterprise Resource Planning (ERP) project.
2) There is a significant correlation between the dimensions of the business strategy (competitive and

424

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

cooperative) and after the management of customer relations.

3) The absence of significant correlation between the dimensions of the strategy of work (competitiveness) and cooperative) and after supply chain management.

4) The absence of significant correlation between the dimensions of the strategy of work (competitiveness, cooperative) and after the business intelligence.

5) There is no significant correlation between the dimensions of the work strategy (competitiveness and cooperation) and after knowledge management.

6) The absence of a significant statistical correlation between the dimensions of the business strategy (competitiveness, cooperative) and the dimensions of the information systems combined.

7) There is no statistically significant correlation between the dimensions of the work strategy and the common dimensions of the information systems combined.

The second main hypothesis: (There is a significant correlation between the dimensions of the work strategy and the dimensions of the information systems). This hypothesis is divided into five sub-hypotheses:

1) Sub-hypothesis 1: There is no significant effect of the relationship between the dimensions of the business strategy (competitive and cooperative) and the enterprise resource planning project.

2) Sub-hypothesis 2: There is no significant effect between the dimensions of the business strategy (competitiveness and solidarity) and management of customer relations.

3) Sub-Hypothesis 3: There is no significant effect between the ethical dimensions of business strategy (competitive and cooperative) and supply chain management.

4) Sub-hypothesis 4: There is no significant effect between the dimensions of the strategy of work (competitiveness and cooperative) and business intelligence.

5) Sub-hypothesis 5: There is no significant impact between the dimensions of the strategy of work (competitiveness and cooperative) and knowledge management.

2.6. Sample Research:
In a traditional way, to distribute the results that can be obtained from a study on a sample taken from members of the community, so you must select the sample accurately, so that the representative of her community as much as possible. The objective of the sample is to elect a part of the components and components of the society under examination in order to be a valid scientific and statistical development of the conclusions applicable to the whole society as well as the role of sampling in time and effort, cost and accuracy of results and speed of data collection.

A number of industrial companies under investigation (5), one of the industrial companies operating in Iraq, were selected for the purposes of field study, and 32 managers were selected for these companies.

3. Theoretical Framework

3.1. Concept of the business strategy:

Is concerned with the level of strategic business unit to create a distinction between the center of the organization and the centers of its competitors. In order to create the center, the institution must determine whether the completion activities mean differently (performing activities differently) or performing different activities (performing activities differently) than their competitors. Thus, the strategy at the business level is to choose how to manage their fundamental activities in support of the value chain, creating a unique value [1]. The strategy focuses on how to compete for each business (product / service or set of products / services for the specific product / service) of the market or sector (part of) the market it serves in the industry and then associated with the unit. Strategic Business Unit (SBU) is a part of the organization that has the capacity to develop and develop its own strategy in the light of the overall strategy and objectives of the organization and should include functional activities (activities such as human resources, operations, marketing, finance, etc.) [2] achieved overall competitiveness and strategies. Responsibility for strategy formulation and business units of senior management in collaboration with executive departments or business unit managers and strategic organizations is being developed in multiple activities and strategic business units and submitted to senior management for discussion and approval. Roles of managers and strategic business units in defining objectives and strategies, long-term business unit, defining the nature of business activities and processes, allocation of human and material resources for each unit, and identifying a profile for each strategic business unit [3].

[4] defines the strategic business level (a complete and consistent set of commitments and procedures used by the organization to gain competitive advantage by exploiting central competencies in specific product markets). This means that the level of strategic action refers to the organization's options on how to compete in specific markets. These options are important because they create a link between the organization's strategies and long-term performance, given the increasingly complex process of successful competition in the world economy, which are fraught with difficulties.

Below are the most important types of strategies at the level of strategic business units:

1- Competitive strategies: competitive strategies. Competitive strategy (the art of investigation and the exploitation of competitive advantages that are difficult to replicate and sustainable). [5] defined competitive strategy (the moves and entrances adopted by the organization to attract customers, counter competitive pressures and improve their competitive position compared to competitors). [6] found that competitive strategy focuses on improving the competitive position of the organization or business unit compared to competitors within the industry identified by competing with competitors, working with them for power or competitive advantage.

The literature on strategies and business units has included many attempts to develop theoretical frameworks to identify strategic options that were most important and most influential, reflecting the concept of general strategies developed by Porter (2985), where the study of the reality of many manufacturers Cars [7] are among a number of competitive strategies that can rely on business organizations in their quest for a competitive advantage, shown in Figure 2 below, as follows:
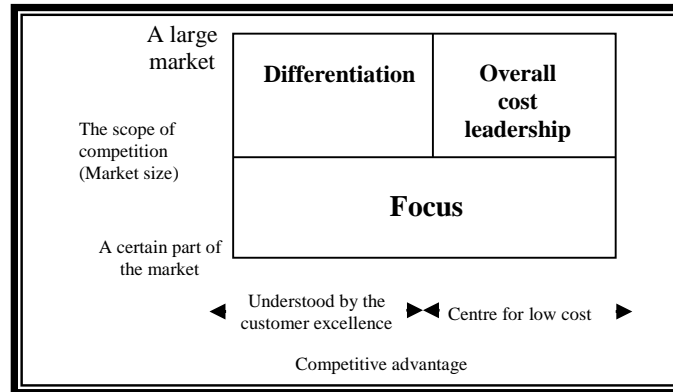

Figure (2) [7] Model of Competitive Strategy
Source: [7], Competitive Strategy, N.Y. Free Press.

2- Cooperative strategies: Another type of strategy is called a cooperative strategy, a strategy in which organizations work together to achieve common goals [8]. This cooperation with other organizations as a strategy to achieve:

• Create value for customers.
• Reduce the cost of building customer value through other methods.
• Create a preferred position on competitors.

Collaborative strategies at the business level are strategies used to help the organization improve its market performance as its own product. The organization follows such a strategy when it believes that the integration of resources and partnership with a partner will create a more competitive feature over that feature that can be created on its own to succeed in the selected market.

3.2. Fundamentals and fundamentals of strategy and information systems

The role of information systems is important and necessary since the beginning of its development, and the initial idea was to automate its contents, especially manually manufactured, with the use of computer and technical procedures that accompanied continuous success and by rational systems and integration, and traditional in these models, the information systems (IS) And be in the management of services. However, it did not take into account the essence of the company's discretion, and generally in the eighth decade of the last century has been the organization of the other's ability, information systems have become, in some cases, a model to implement the company strategy, and that nature has led to the Strategic Information Systems development team (SIS) which, represents information systems to support the organization in achieving its business objectives. The association of this group is not necessary in information systems in particular, and more, the collection of these parts of information systems in the organization prepares information for the strategic planning process.

Adaptation strategy or alignment of an information systems strategy, businesses have an important role to play in reaching important goals for organizations that use IT resources carefully. This kind of business strategy and information systems in organizations may be selected by (Luftman) to apply IT in different ways and provide overall consistency with business strategies, goals and needs. This means that they are necessary for the information system and guidance / goals / (IS), which regulates the business strategy and the public as an example, is that the business strategy will respond to products for sale globally, and the IT strategy will provide global sales information systems to facilitate the sale of global goods [9]. Table (1) shows the links between business strategy and information systems objectives.

Table (1) the correlation between the business strategy and the objectives of the company's information systems

Business strategy	Objectives of information systems
Operational efficiency	Internal
1. 1. Efficiency	Reduce costs and increase production
2. 1. Efficiency	Reduce overall organizational efficiency rapidity
Strategic location	External
1. 1. Access (password)	Expanding the market and geographically
2. 1. Construction	Work on changing industrial and market applications

Source: Kramer, [10], From: [11], "The link between business strategy and information systems", Dublin Institute of Technology, Kevin Street, Dublin 8, Ireland.
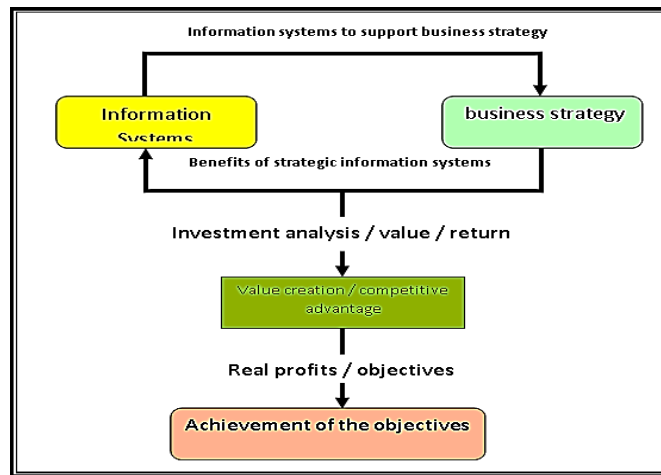
Figure 3 is a simplified model for understanding business strategy and information systems
Source: [11], "The link between business strategy and information systems", Dublin Institute of Technology, Kevin Street, Dublin 8, Ireland. P: 4

There are two preliminary procedures for the first strategy, it is necessary to manage information systems to be formal or informal, should be within the senior management level and have a presence when deciding the business strategy. The second is the key management information systems that contribute to the philosophy of public administration and thinking through standardization [12]. The business strategy and strategic information systems that deal with the molecule have been proposed by [13], which is estimated to be the company that enables them to reach a specific value for information systems that is part of the strategic preparatory procedure.

According to this specific program, an evaluation of the equation has been developed and the productivity of information systems and the achievements of companies that have remained a benchmark for performance 4.

information systems are necessary to gain access to better understanding the return on information systems to analyze the impact of information systems on business activities. Moreover, addressing some businesses to the Porter chain, the value of the consumer is that the cost of increasing or reducing performance activities can be achieved through the use of information systems and the investment of information systems to give value or reduce costs that can be strategic. There are a number of successes, most commonly known as American Airlines (SABRE) and (McKesson's) Systems for economy and control. In general, there are a number of examples of different information systems such as strategic systems (Remingtons EDI), in addition to linking investment information systems and business performance, see Figure
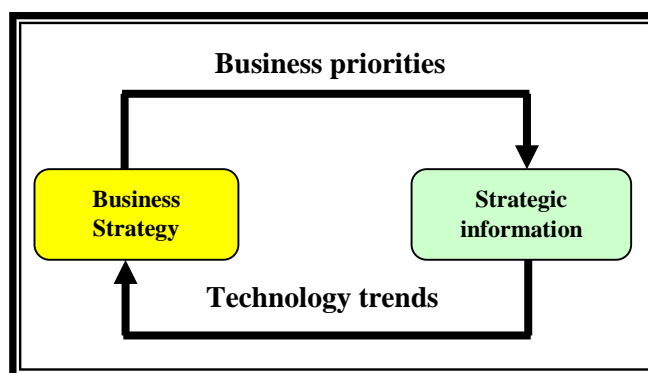

Figure (4) Strategic alignment between business strategy and strategic information systems
Source: [14], from: [15], "The link between business strategy and information systems", Dublin Institute of Technology, Kevin Street, Dublin 8, Ireland. P: 5.

3.3. Competitive Sustainable advantage through Information Systems

The competitive advantage used as a concept is widely used in strategic management but has so far lacked a specific definition and in what way it works. [16] has

identified three observations regarding the competitive advantage of clarification by determining the relationship between competitions:

1) Competitive advantage imitation performance cannot be easy.

427

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

2) The competitive edge advantage is my relationship
3) Competitive advantage associated with specific content.

The competitive advantage of the company's evaluative core, for example, is to combine the company's unique strategies and capabilities and compare them with other companies [17] and live examples of contact with Coca-software and the dimensions of its PC markets and operating systems, showing the strength of the company's competitive advantage. There are two basic types to give a combination of the company's activities to seek access through the leadership strategies of the three public to reach the rate of performance in this type

requires industry competitive advantage, total cost leadership, differentiation, focus, and focus strategy dimension, focusing on costs and focus on Differentiation [18]. [19] discussed how to achieve sustainable competitive advantage in supply chain through the resources of the organization and the duty to possess four characteristics (see figure 5):

1) Must be evaluated and able to seize opportunities and threats in the organization's environment.
2) Must be able to handle current and potential competition.
3) Be able to simulation.
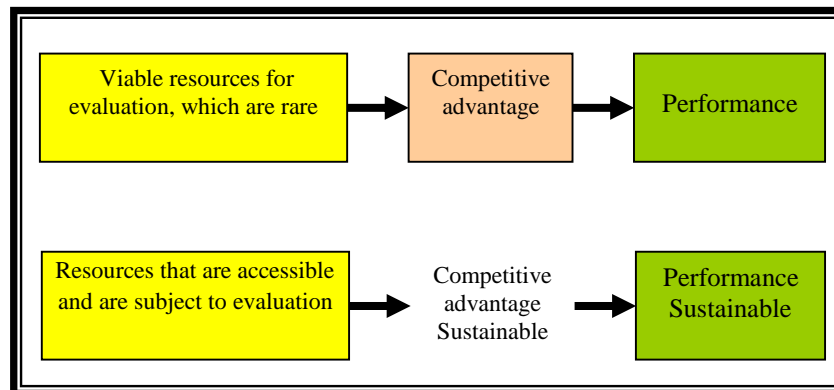4) Competitors' strategy cannot be defined as a reward.

Figure (5) Conceptual model of the competitive advantage of the point [19]
Source: [20], "Management, Strategic Management Theories and the Linkage with Organizational Competitive Advantage from the Resource-Based View"

3.4. Systems with competitive advantage:

Access to the competitive advantage requires the adoption of the value chain of the company through systems management without grouping or independence of the parts. Thus, coordination is to increase the company's reliance on enabling it to obtain a sustainable competitive advantage in supply chain and a flowing effect on the use of information systems and information resources that give information to its users. The company can create a competitive advantage through this information, and the competitive advantage derived from this information in these companies may adopt art technology. In addition, some information systems allow the company to plan an Enterprise Resource Planning (ERP) systems, as well as customer relationship management (CRM), supply chain management (SCM), business intelligence systems (BI) and knowledge management (KM), cannot ignore the role of influential and can explain the following:

1. Enterprise Resource Planning:
Is a comprehensive integrated information system that supports many projects and data needs, a set of software models that are compatible with existing information systems in the organization that meet the integrated and comprehensive information system?
Operating systems, the ERP project to integrate information-based processes and processes at all stages and across key functional areas of the organization. These systems are indispensable tools for functional

integration into the activities and processes carried out within the organization, which are the infrastructure for managing online business activities.

ERP system updates the information on sales and production forecasts and calculates the actual cost of the product and the profitability of the organization. In general, this system contributes to the provision of integrated information to achieve the relationships between application processes (according to customer needs), processing (according to production processes).

2 - Planning the relationship of the client:
Customer Relationship Planning (CRP) is designed to help companies use technology and human resources to identify customer behavior and give value to the clien). The relationship management client is the way to deal with the company with its current and potential members. The management of these relationships is the subject of business management and investment technology used in information systems, in order to unify the working procedures surrounding the company's interaction with its customers in sales, marketing and other services provided to them. The globalization of companies for the emergence of a lot of applications such as data storage planning and project resources and customer relationship management, which in turn also depletes storage space quickly and as these applications are necessary speed and effective access to data, were in the business markets, new

industries such as (data mining) no data extraction. These data, which include many fictional data in the markets, customers and consumers, which get companies to serve customers and benefit from their experience in order to benefit from everything related to the field. Information will be of little value unless analyzed by a data specialist, armed with data management and analysis programs, to convert this vast amount of raw data - so to speak - into a good material suitable for eating. Of this concept and the idea of data extraction solutions, which allows database managers to make the most of the information about their corporate clients. Systems and CRM connect marketing, sales, and customer service activities with sales chain management and activities related to the application of decision support systems as well as office automation activities and workflow management within the organization. In addition, management systems and CRM functions assume the organization's relationships with its customers by meeting their immediate needs, in particular purchasing orders, processing, querying or ordering after-sale services and all areas of direct relationship with customers (individuals and groups) Of stakeholders and, in particular, owners, shareholders and beneficiaries of the organization's activity and its continued presence in the market or industry.

3- Supply chain management:
[21] note that supply chain management is the close relationship between activities related to purchasing, manufacturing and moving the product. Information systems make supply chain management more efficient, by helping companies coordinate, schedule, control procedures, produce, manage inventory, store and distribute products and services to customers.

4 - Business Intelligence:
Business Intelligence (BI) systems provide a framework of data and reporting tools to support improved decision-making by the company, which collects and analyzes data to determine what you need to increase business efficiency. Processes and systems, business intelligence is inherently used in knowledge management systems.

5- Knowledge management:
Knowledge Management (KM) is the procedure used by the company to ensure the value of its operations and knowledge assets in accordance with the general terms. This means ensuring that the value of all assets, which includes its share among employees, departments and even other companies in their efforts to reach the best applications, In information systems to facilitate this, because information systems are self-contained.
 [20] noted that information technology is best able to maintain knowledge as a productive intellectual asset or capital on the open side (selected patents, databases, information systems, and everything related to the good side). This has been combined with Ktdfq's view of knowledge or intellectual capital in any part of the implicit generation as a continuous process and establishment represented by individuals in the company. If information technology is collected, documented and organized. The people who use it to create new knowledge create value and enhance the company's competitive advantage. [21] emphasize that information systems work to address knowledge, analysis, communication and document management, as well as access to information and knowledge sources both internally and externally.

The second topic - the Applied Research
First - check and test measurement tool Search:
1 - Coding and description:
    Consists of two parts, the search tool: the business strategy indicators and indicators of information systems. Each part consists of several sub-dimensions of the table (2) provides clarification on the coding of each variable after all, identify the source to get on the scale and number of items:

Table (2) coding and description

The variable	The dimension	Number of phrases	Symbol	Sources
Strategy Business	1. Competitiveness.	5	COM	**(Hitt et al.,2007; Hall&Jones,2001)**
	2. Cooperative.	5	COO	
Information Systems	1.Enterprise resource planning	5	ERP	**) Gleeson,2004(** **(Tai and Abadi, 2009) (Abadi and Areda, 2011)**
	2.Customer relationship management	5	CRM	
	3.Supply chain management	5	SCM	
	4.Business intelligence	5	BI	
	5-Knowledge management	5	KM	

Second: Find a test measuring instrument
 Must perform the following tests to ensure the accuracy and validity of the data obtained through the use of the questionnaire, which revolve the validity and reliability, and are as follows:

A. Find true measurement tool: This includes the important axes are apparent sincerity, honesty and structural, and as follows:

1. Virtual honesty of the tool: The researchers introduced the search tool in its initial number of arbitrators who specialize in the field of business

management's (5) an arbitrator in order to ascertain the truth of the virtual instrument of measurement.

The researchers prepared a special form to solicit the views of the arbitrators on the extent and clarity of all the words in terms of intellectual content and drafting and correct what needs to be corrected with the addition of phrases or delete the arbitrator finds any of the words in the center of the axes. In light of the views shown by the arbitrators, the researcher conducting the amendments agreed to by all of them, and modify the wording of some phrases that saw the arbitrators need to be reformulated to be more pronounced.
2. Honesty constructivist exploratory tool for the measurement:

Depends on the honesty constructivist exploratory factor analysis method of exploratory (EFA) whose purpose is essentially summarize and reduce the multiple variables in a smaller number of variables, so-called factors (Factors) as each of these factors, some or all of these variables. And exploratory factor analysis gives the freedom to link paragraphs factor that fits in line with them so that construction does not depend on the default of previous studies on the structure of the scales. In the current research will depend on the factor analysis exploratory using a program (SPSS, V.15) to test the measure of the independent variable (indicators of business strategy - SUB) and the scale variable Alastjaba (Information Systems - IS) in order to explore the explicit dimensions involved under these standards, Therefore, exploratory factor analysis will be used to help determine the dimensions covered by the measure and also to identify paragraphs that are not associated with the structure of the scale and dimensions that must be of the scale. Through the adoption of the five criteria should be met by the result of this analysis are:

1) The adequacy of the sample and the existence of correlations between variables.
2) The cumulative percentage of variance unexplained give more meaningful when more than (0.60).
3) The minimum value of the latent root (Eigen Value) for the right one.
4) Increase Chavat paragraphs (Loading) for (0.30) so as to be statistically significant.

Table (3) test (KMO) and (Bartlett) for indicators of business strategy

Kaiser-Meyer-Olkin Measure Sampling Adequacy	0.934
Bartlett's Test of Sphericity	
Approx. Chi-Square	1965.213
Df	176
Sig.	.000

The results above confirm that the first criterion of verification of the criteria necessary to test the exploratory factor analysis (EFA).
B. Standard indicators of information systems IS:

5) Paragraphs you will get a good Chavat passing on other factors low (Cross-loading) (less than 0.30).

A. Indicators measure business strategy: Requires exploration explicit dimensions involved under the standard indicators of business strategy, which consists of (10) paragraph to use the method of factor analysis exploratory (EFA) in order to identify paragraphs valid will involve under this measure and what is the dimension that belongs to him and also exclude items that do not check the account the fourth and V of the above criteria.
1. The adequacy of the sample and the existence of correlations between the variables: The requirement of adequacy of the research sample (Sampling Adequacy) of the most important conditions necessary to be provided for the use of exploratory factor analysis. To investigate this condition, the researchers recommended the use of standard Kaiser - Meyer - Aolkin (KMO) (The Kaiser-Meyer-Olkin Measure), which is one of the important steps in this analysis. Statistical range (KMO) between (0-1). And the value (0) indicate that the partial sum of links greater than the sum total links and this model shows that the correlation be widespread (and here the use of exploratory factor analysis is appropriate). If the value is close to (1) on, it indicates that the model links compatible and factor analysis will be credible and recommends (Kaiser) that the accepted values are greater than (0.50) and values that are lower than this value means that the researcher either to collect more data (increasing the size of the sample) or rethink variables included in the scale.

As shown in Table (3), the value (KMO) is greater than (0.50), which amounted to (9340.), which according to the classification (Kaiser) is a very large value.

With regard to the existence of relations link between the variables was used test Bartlett (Bartlett), who tested the null hypothesis (Null Hypothesis), which indicates that the correlation matrix is a matrix unit (IdVAMity Matrix), and if the correlation matrix was the matrix unit, this means that all correlation coefficients equal to zero. So we want this test to be moral. The moral test will tell us that the correlation matrix is not a unit matrix. As shown in the table, the test (Bartlett) refers to the existence of the moral.

In the same manner as with the standard indicators of business strategy (SUB), the exploration explicit dimensions involved under the scale information systems (IS), which includes (20) paragraph needs to use factor analysis exploratory (EFA) to identify items that will involve under this measure and what is the dimension which contains, and excludes items that do not meet the criteria of the fourth and fifth considerations honesty structural exploration has also been used in the above paragraph.
1. The adequacy of the sample and the existence of correlations between the variables:

Also used a measure Kaiser - Meyer - Aolkin (The Kaiser-Meyer-Olkin Measure) (KMO) to verify the adequacy of the research sample for the use of exploratory factor analysis. Table (4) that the measure of the value of the Kaiser - Meyer - Aolkin is greater

430

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

than (0.50), which amounted to (0.841), which according to the classification (Kaiser) is a very large value.

Concerning the existence of relations of association between variables was also used Bartlett test (Bartlett) and as shown in the table (4) the test (Bartlett) refers to

The existence of the moral, and this indicates the existence of the relationship between the dimensions of the scale.

Table (4) test (KMO) and (Bartlett) for indicators of information systems

Kaiser-Meyer-Olkin Measure Sampling Adequacy.	0.841
Bartlett's Test of Sphericity	
Approx. Chi-Square	2971.187
df.	222
Sig.	.000

This result suggests to check the first criterion of selection criteria that exploratory factor analysis with respect to a measure leading indicators Marketing (EM).

B. Find the stability of a measurement tool:

Stability refers to the consistency of scale and consistency of research results can be obtained from the standard across different time periods. The structural stability of the measurement tool (Construct Reliability) is verified through the use of test Cronbach alpha coefficient was calculated stability of the tool using the Cronbach alpha coefficient of correlation shown in the table (5):

Table (5) reliability coefficients for the measurement tool Search

Cronbach alpha coefficient for each dimension	Dimension	Cronbach alpha for the variable	the variable
0.834	1. Competitiveness.		Strategy Business
0.736	2. Cooperative.	0.785	
0.797	1.Enterprise resource planning	0.863	Information Systems
0.863	2.Customer relationship management		
0.862	3.Supply chain management		
0.943	4.Business intelligence		
0.853	5- Knowledge management		

The table shows (5) that the values of Cronbach alpha coefficient ranged between (0.785-0.883), a statistically acceptable in administrative and behavioral research because their value is greater than (0.75), which indicates that the tool is characterized by coherence and consistency of procedure.

Secondly - hypothesis testing

1 - The first main hypothesis (no correlation between the significant moral dimensions of business strategy and the dimensions of information systems).

Adopted in this research on the simple correlation coefficient (Pearson) to test the main hypothesis of the first and the link relations between the dimensions of business strategy the independent variable and the dependent variable (Information Systems). The table shows (6) matrix of simple correlation coefficients (Pearson) between the dimensions of these variables. Before entering into the four sub-hypotheses test this hypothesis, the table (6) also refers to the size of the sample (32) and the type of test (2-tailed). And concise (Sig.) in the table refers to the moral test of the correlation coefficient by comparing the value of (t) calculated with the scheduling of the shows is that their values. If the back of an asterisk (*) on the correlation coefficient, this means that the value of (t) is greater than the calculated scheduling. And are judged on the amount of force the correlation coefficient in the light of the base, and as follows:

- Low correlation: if the value of the correlation coefficient is less than (0.10).
- A moderate correlation: if the value of the correlation coefficient between (0.30 - 0.10).
- A strong correlation: if the value of the correlation coefficient is higher than (0.30).

The branching of this hypothesis seven sub-hypotheses are:

1) there is a correlation significant moral dimensions of of business strategy (competitive, cooperative) and after the ERP project

Table shows the correlation matrix (6) that there is a relationship link strong (because the value is greater than 0.30) and with significance at the level (% 1) between the dimensions of business strategy (competitive, cooperative) (COM, COO) and after the ERP Project (ERP). Reaching values of simple correlation coefficients between these dimensions,

431

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

respectively (0.754, 0.817). This result supports the hypothesis subsection (1).

2) There is a correlation significant moral dimensions of business strategy (competitive, cooperative) and after the customer relationship management. Table shows the correlation matrix (6) that there is a strong link and relationship with significance at the level (% 1) between the dimensions of business strategy (competitive, cooperative) (COM, COO) and after the customer relationship management (CRM). The total values of correlation coefficients between these dimensions, respectively (0.743, 0.718). This result supports the hypothesis subsection (2).

3) There is a correlation significant moral dimensions of business strategy (competitive, cooperative) and after supply chain management. Table indicates the correlation matrix (6) that there is a strong link and relationship with significance at the level (% 1) between the dimensions of the phenomenon of business strategy (competitive, cooperative) (COM, COO) and after the supply chain management (SCM). The total values of correlation coefficients between them, respectively (0.778, 0.832). This result supports the hypothesis sub (3).

4) There is a correlation significant moral dimensions of business strategy (competitive, cooperative) and after business intelligence. Table indicates the correlation matrix (6) that there is a strong link and relationship with significance at the level (% 1) between the dimensions of the phenomenon of business strategy (competitive, cooperative) (COM, COO) and after Business Intelligence (BI). The total values of correlation coefficients between them, respectively (0.734,0.788). This result supports the hypothesis sub (4).

5) There is a correlation significant moral dimensions of business strategy (competitive, cooperative) and after knowledge management. Table indicates the correlation matrix (6) that there is a strong link and relationship with significance at the level (% 1) between the dimensions of the phenomenon of business strategy (competitive, cooperative) (COM, COO) and after knowledge management (KM). The total values of correlation coefficients between them, respectively (0.766,0.771). This result supports the hypothesis subsection (5).

Table (6) Matrix of correlation coefficients between the dimensions of business strategy and the dimensions of information systems Correlations

	COM	COO	ERP	CRM	SCM	BI	KM
COM Pearson Correlation N	1 32						
COO Pearson Correlation Sig. (2-tailed) N	.764** .000 32	1 .000 32					
ERP Pearson Correlation Sig. (2-tailed) N	.754** .000 32	.817** .000 32	1 .000 32				
CRM Pearson Correlation Sig. (2-tailed) N	.743** .000 32	.718** .000 32	.795** .000 32	1 .000 32			
SCM Pearson Correlation Sig. (2-tailed) N	.778** .000 32	.732** .000 32	.817** .000 32	.698** .000 32	1 .000 32		
BI Pearson Correlation Sig. (2-tailed) N	.743** .000 32	0.788** .000 32	.718** .000 32	.858** .000 32	.754** .000 32	1 .000 32	
KM Pearson Correlation Sig. (2-tailed) N	.766** .000 32	.771** .000 32	.561** .000 32	.832** .000 32	.643** .000 32	.714** .000 32	1 .000 32

**. Correlation is significant at the 0.01 level (2-tailed).
 *. Correlation is significant at the 0.05 level (2-tailed).

6) There is a correlation significant moral dimensions of business strategy (competitive, cooperative) and the dimensions of information systems combined. Table of the correlation matrix (7) that there is a strong link and relationship with significance at the level (% 1) between the dimensions of the phenomenon of business strategy (competitive, cooperative) (COM, COO) and after the information systems (IS) dimensions combined. The total values of correlation coefficients between them, respectively (0.715, 0.712) and this result

supports the hypothesis sub (6).

7) There is a correlation significant moral dimensions of business strategy and the combined dimensions of information systems combined. Table shows the correlation matrix (7) that there is a relationship strong and at the level of significance (% 1) between the phenomenon of variable dimensions of business strategy (SUB) and the variable dimensions of the combined information systems (IS) (combined dimensions). The value of the correlation coefficient

432

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

between them (0.861) and this result supports the hypothesis sub (7).

Table (7) Matrix of correlation coefficients between the dimensions of business strategy and the combined dimensions of information systems

	COM	COO	SUB	IS
COM Pearson Correlation N	1 32			
COO Pearson Correlation Sig. (2-tailed) N	.752** .000 32	1 .000 32		
SUB Pearson Correlation Sig. (2-tailed) N	.715** .000 32	.712** .000 32	1 .000 32	
IS Pearson Correlation Sig. (2-tailed) N	.754** .000 32	0.829** .000 32	.861** .000 32	1 .000 32

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

2 - The second main hypothesis: There is a significant effect relationship between the moral dimensions of business strategy and the dimensions of information systems.

For the purpose of testing the main hypothesis II, the search will depend on multiple regression analysis using the beta and the standard value (T) and the value of (F) and the coefficient of determination (Interpretation) ($R2$).
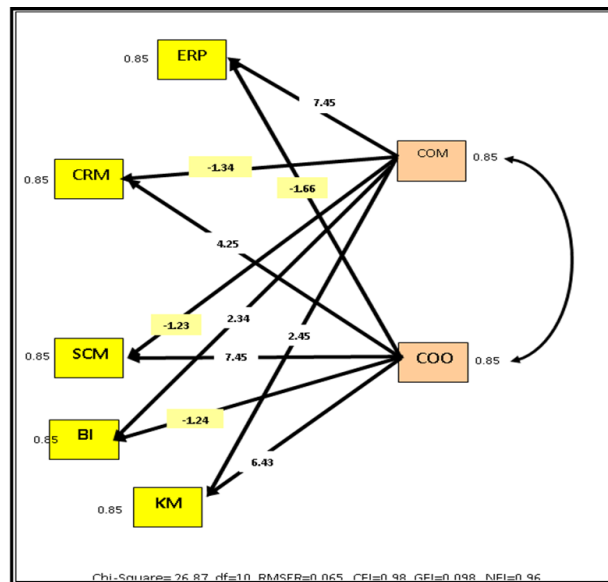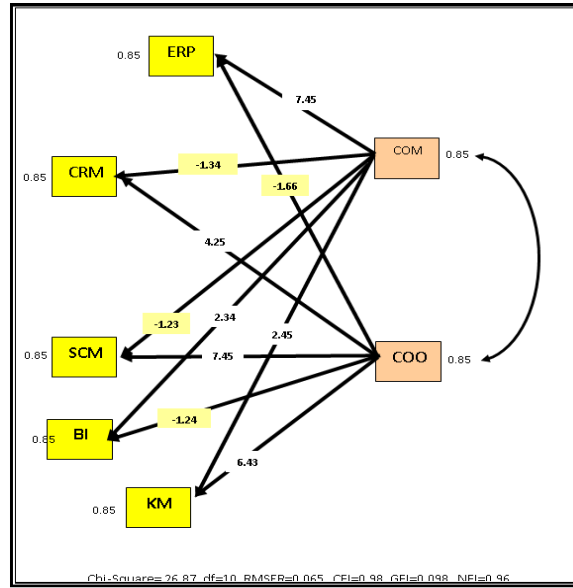
The branching of this hypothesis five sub-hypotheses:

1) First sub-hypothesis: no significant effect of relationship between the moral dimensions of business strategy (competitive, cooperative) and the ERP project.

2) The second sub-hypothesis: no significant effect of relationship between the moral dimensions of business strategy (competitive, cooperative) and customer relationship management.

3) The third sub-hypothesis: no significant effect of relationship between the moral dimensions of business strategy (competitive, cooperative) and supply chain management.

4) The fourth sub-hypothesis: no significant effect of relationship between the moral dimensions of business strategy (competitive, cooperative) and business intelligence.

5) The fifth sub-hypothesis: no significant effect of relationship between the moral dimensions of business strategy (competitive, cooperative) and knowledge management.

The research also adopted to test the main hypothesis II (Pferziatha subsidiary) on the structural model (Alfrda) Structural Model using structural equation modeling (SEM) through the use of the program (LISREL.8.7). And shape (6) is a model of structural to a research hypothesis major second, which shows the dimensions of the changing business strategy to search the current (competitive, cooperative) and the dimensions of the variable-based information systems (ERP project, customer relationship management, supply chain management, business intelligence, knowledge management). And shows by appropriate measures at the bottom of the form (Chi-Square, df =, RMSER, CFI, GFI, NFI) that the structural model of the current search for an appropriate research data (when compared with the table (8)). One-way arrows of the independent variables to the variables influencing the relationship is adopted in the so-called standard transactions. And shape (6) includes ten (10) sliding path reflects five sub-hypotheses of the second main hypothesis, (6) was a downhill path with the impact and significance of (10) sliding path. For this was the exclusion of the tracks is the moral decline and left the tracks just as the moral is clear from the figures (7), (8). The figure shows (7) the values of the standard regression coefficients shown on the arrows between the dimensions of the independent variable and the dependent variable, and the form (8) presents the values of (t) to deduce the significant regression coefficients in standard form (7).

Table (8) and the base of quality indicators corresponding to the structural equation modeling

Sequence	Indicators	The quality of the corresponding base
1	The ratio between the values of X2 and the degrees of freedom df	Less than 5
2	Goodness of Fit Index (GFI)	Greater than 0.90
3	Normed Fit Index (NFI)	Greater than 0.90
4	Comparative Fit Index (CFI)	Greater than 0.95
5	Index of the root mean square approximate line	Between 0:08 to 0:05

433

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

434

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019
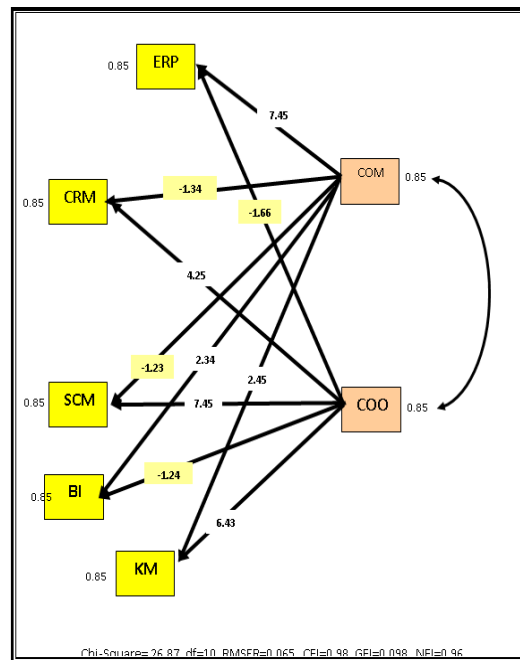
Figure (6) tracks regressions for sub-hypotheses (1-5) according to the method of structural equation modeling
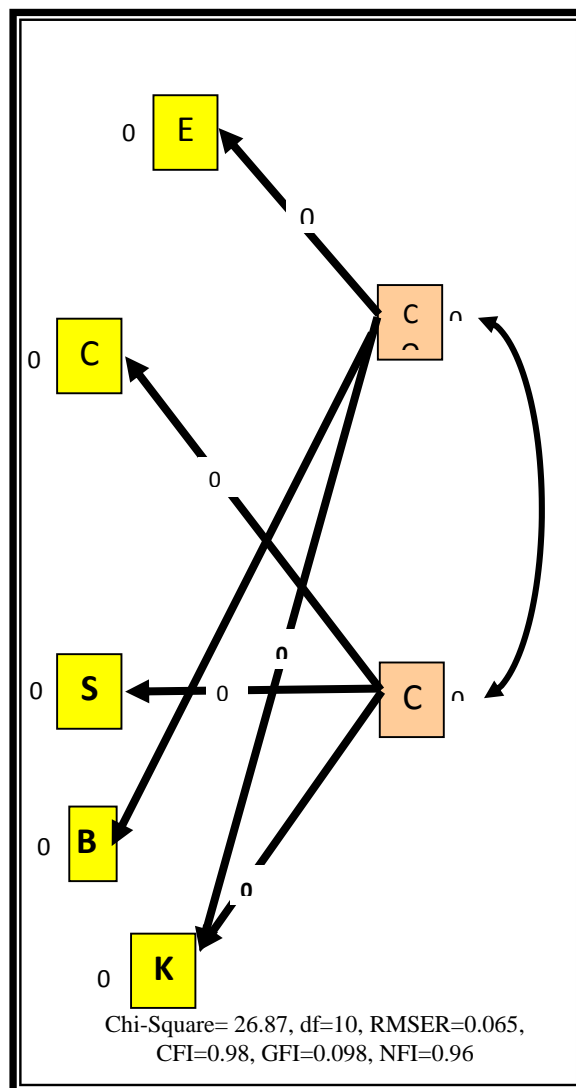

Figure (7) beta regression coefficients for sub-hypotheses (1-5) according to the method of structural equation modeling

435

Int. J Sup. Chain. Mgt   Vol. 8, No. 1, February 2019

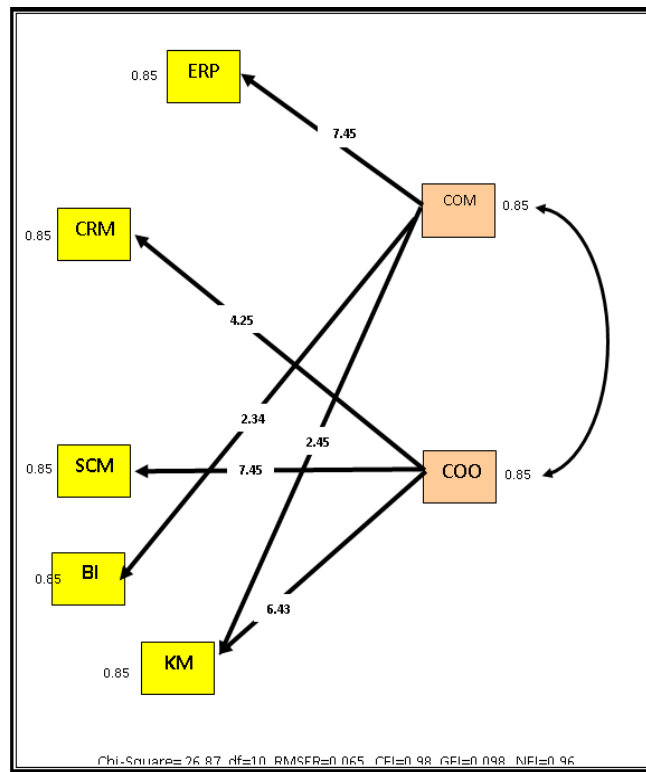Chi-Square= 26.87, df=10, RMSER=0.065, CFI=0.98, GEI=0.098, NEI=0.96

Figure (8) the values of (t) of sub-hypotheses (1-5) according to the method of structural equation modeling

And Table (9) displays the values of the regression coefficients and the values of (t-value) and the paths and the value of the regression (R2) and the value of (F)

Table (9) Summary of the values of the regression paths and the regression coefficients and the values of (t) and (R2) and the value of (F) of sub-hypotheses (1-5)

Value R2 & F	Value t	The regression coefficients	Regression paths	The second main hypothesis (from 1-5)
R^2= 0.88 F= 621.1**	7.45 **	0.71	COM ERP	Hypothesis subparagraph 1
R^2= 0.81 F= 545.2 **	4.25 **	0.66	COO CRM	Hypothesis 2, subparagraph
R^2= 0.67 F= 32.34 **	7.45 **	0.71	COO SCM	Hypothesis 3, subparagraph
R^2= 0.86 F= 615.2 **	** 2.34	0.06	COM BI	Hypothesis subparagraph 4
R^2= 0.80 F= 544.2	** 2.45 ** 6.43	0.07 0.86	COM KM COO KM	Fifth hypothesis 5

* Means significant at the level (% 1), * means significant at the level (% 5)

Shows us the previous table and figures (7), (8) a relationship effect positive morale among the dimensions of the strategy work (competitive) and after project planning (ERP) as total regression coefficient standard beta (0.71) which are of significance at the level (% 1). Has the value (F) as the moral worth (621.1), which indicates the strength of the statistical model which relates to the first sub-hypothesis of the second main hypothesis, and the value of the coefficient of explanation   (R2)   was   (0.88).

With regard to the second sub-hypothesis, are found the impact of significant relationship between the moral dimensions of business strategy (CDP) and after the customer relationship management (CRM) as the standard regression coefficient beta (0.66) which are of significance at the level (% 1). Has the value (F) as the moral worth (545.2), which indicates the statistical power of the model for this hypothesis has reached the

value of coefficient of explanation (R2) (0.81). There also appeared significant effect relationship between the moral dimensions of business strategy (CDP) and after supply chain management (SCM) as the standard regression coefficient beta (0.71) which are of significance at a level (% 1,% 5). Has the value (F) as the moral worth (32.34), which indicates the statistical power of the model for this hypothesis has reached the value of coefficient of explanation (R2) (0.67).

And there appeared significant effect relationship between the moral dimensions of business strategy (competitive) and after Business Intelligence (BI) as the standard regression coefficient beta (0.06) which are of significance at the level (% 1). Has the value (F) as the moral worth (615.2), which indicates the statistical power of the model for this hypothesis has reached the value of coefficient of explanation (R2) (0.86).

There also appeared significant effect relationship between the moral dimensions of business strategy (competitive and cooperative) and after knowledge management (KM) as it reached the standard beta regression coefficients (0.07, 0.86), respectively, which are of significance at the level (% 1). Has the value (F) as the moral worth (544.2), which indicates the statistical power of the model for this hypothesis has reached the value of coefficient of explanation (R2) (0.80).

The rest of the relations of influence (regression paths) and the number of (4) refers to the lack of relationship with the impact of significance at levels (% 1,% 5).

4. Conclusion and Implications

1) Industrial companies are always looking to achieve a sustainable competitive advantage in supply chain and therefore find a way to get this feature in the industrial sector, so the business strategy is one of the ways to achieve sustainable competitive advantage and thus achieve competitive advantage to other companies.

2) When information systems are adopted by the management of industrial companies and effectively, will be utilized and the staff of the companies.

3) In the contemporary companies, business strategies, the strategies are essential for the development of the work force that has all the capabilities, motivations, and the authorization is necessary to find and contribute in new ways to achieve sustainable competitive advantage in supply chain and effectively and efficiently.

4) Should be based study sample companies to achieve sustainable competitive advantage in their work and that by taking advantage of the relationship between business strategy and information systems.

5) The need to focus and by industrial companies on the concept of information systems as one of the important concepts that affect their work performance.

6) Is to achieve a sustainable competitive advantage if firms and focused substantially on business strategy. This allows them to benefit from the information systems available to them.

7) Access to sustainable competitive advantage in supply chain requires business organizations that fit between business strategy and their own information systems available with the use of their resources, information and conformity with the resources of its competitors and their capabilities in the context of the competitive environment and how to maintain this feature [22].

References

[1] Rasheed, S.A.R, and Gulab, A. *(Strategic Management: An Introduction integral)*, House of curricula for Publishing and Distribution, Amman – Jordan, 2008.

[2] Tai, J.H., and Abbadi, F.H.D. (*customer relationship management),* Warraq Foundation for Publishing and Distribution, Amman – Jordan, 2009.

[3] Tai, J.H., and Abbadi, F.H.D. *(e-marketing),* Warraq Foundation for Publishing and Distribution, Amman – Jordan, 2009.

[4] Guendhilji, A.I., and Al-Janabi, A.A.Q. (*management information systems and information technology),* the march of the House Publishing and Distribution, Amman – Jordan, 2005.

[5] Al-Lami, G.Q.D., and al-Bayati. *thanked the Crown Princess. (Information technology in business organizations - the uses and applications)*, Warraq Foundation for Publishing and Distribution, Amman – Jordan, 2010.

[6] Saad al-Ghalib, Y., and Keywords, B.A. *(electronic business)*, Dar curriculum for Publishing and Distribution, Amman – Jordan, 2009.

[7] Agasti, K. *"Creating Sustainable Competitive Advantage through Information technology",* http://www.indiainfoline.com/bisc/cre a.pdf, accessed, 2004.

[8] Barney, J.B. *"Firm resources and sustained competitive advantage".* Journal of Management, Vol. 17, No.1, 1991.

[9] Clarke, R. *"The Path of Development of Strategic Information Systems Theory",* http://www.anu.edu.au/peoplee/Roger.Clarke/SO S/StratISTh.html, 2004.

[10] Deck, S. *"What is CRM?"* ,http://www.cio.com/research/crm/edit/ crmabc.html, 2004.

[11] Earl, R. "*Eight Imperatives for the New IT Organization,"* Sloan Management Review, Vol 38, 1996.

[12] Gleeson, M. *"The link between business strategy and information systems",* Dublin Institute of Technology, Kevin Street, Dublin 8, Ireland, 2004.

[13] Henderson and Venkatrman. *"Strategic Alignment: Leveraging Information Technology for Transforming Organizations"*, IBM Systems Journal, Vol 32, No. 1, 1993.

[14] Hitt, M.A., Hoskisson, E.R., Duane, R. *"Management of Strategy: Concepts and Cases"*, 1st ed., South-Western, New York, 2007.

[15] Kramer, T. *"When Context Matters: Making sense of Executives Perceptions of IT Payoffs using Strategic Intent for IT"*, CRITO/IBM Joint Publication, 1999.

[16] Ma, H. *"Competitive advantage and firm performance"*, Competitiveness Review, Vol. 10, No. 2, pp. 16-17, 2000.

[17] Mintzberg, H., & Quinn, J. *Strategy Process* 3rd ed., Prentice- Hall Inc., U.S.A, 1996.

[18] Nickerson, R. *"The Strategic Impact of Information Systems"*, http://online.sfsu.edu/~rnick/, 2004.

[19] Porter, M. *"Competitive Advantage"*, NY Free Press, New York, 1985.

[20] Porter, M.E. *Competitive Strategy*, N.Y. The Free Press, 1980.

[21] Li, S., Ragu-Nathan, B., Ragu-Nathan, T., and Rao, S.S. *"The impact of supply chain management practices on competitive advantage and organizational performance,"* Omega, Vol. 34, No. 2, pp. 107-124, 2006.

[22] Vickery, S.K. Jayaram, J., Droge, C., and Calantone, R. *"The effects of an integrative supply chain strategy on customer service and financial performance: an analysis of direct versus indirect relationships,"* Journal of operations management, Vol. 21, No. 5, pp. 523-539, 2003.