The Impact of Business Intelligence on Strategic Decision-Making

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Abstract
This article is concentrated the relation between business intelligence and strategic decision-making. Business intelligence is an important issue to collect and bring the data together that decision-making is depended on. Managers in today's organizations are still to know how to apply business intelligence in strategic decision-making. The main aim of this study is to explore the impact of business intelligence on strategic decision making. Strategic decision making defined as gradual and interdependent, which is formed by a variety of impacts contextual to the past events arising in present-day conditions and finally the future views.Using questionnaires applied at four different communication companies in Iraq, the experience managers have participated from top level managers and those in the middle-level management. The SPSS software used to analyze the result, when the result indicated that business intelligence has a great impact on strategic decision-making and improved the efficiency and effectiveness. The relation between business intelligence parts and strategic decision shows different result, business intelligence tools, business intelligence Use, business intelligence system infrastructure flexibility improved the efficiency of strategic decision making.
Keyword: Business intelligence, Strategic Decision

Introduction
The world has seen a significant change in all works of life, in particular since the beginning of the last decades of the century. It has clearly reflected its effect on the practices and the nature of organizational relationships, the roles and problems beyond the borders of countries where organizations live in different types and activities by the growing effects of the commission and its dimensions. The need to predict the future of the organizations is part of a local system within the broader global system; this affects the activities, plans, strategies, and decisions of those organizations by non-conforming, which holds the future of the organization. Cares detection about organizations' basic lineaments and the search for appropriate scientific methods, which can explores and prepares for the future to face this trend of developments and changes. As to those circumstances and variables that accompanied the diversity and restriction factors in internal and external environment, organizations current era, necessitated the presence of leaders and thinkers. Leaders and thinkers become smarter with the intellectual capacity and skills of non-conventional which depends on development of knowledge, experience, principles, as well as the formation of perceptions, visions related to the future and also the ways to confront the present. Adding to the importance of follow-up and analysis to continue to discuss the possibility of containment, and then try to control them to ensure excellence and be successful. Business intelligence is an effective tool to direct the organization so as to accomplish its goals, maintain its position and read the future by taking the right strategic decision.

In organizational planning, there will be discussion about some parts of BI, which contains, concepts, BIS infrastructure flexibility, tools and other aspects. However the importance of BI realizes itself from the data that will transform it into the kind of information needed. BI has an important role in decreasing the degree of uncertainty, which is necessary for each manager to make the right decision. The process of decision-making and strategy has a relation in the way that decisions will depend on the strategy that makes and maintains each decision in the future. For the sake of strategic decision going work for a long period, it will need the explanation of effectiveness of strategic decision. Having described all aspects of BI and SD and the methods of collecting data, the researcher is going to use a quantitative approach with descriptive method that would include survey questionnaire and hypotheses of business intelligence and strategic decision. After data collection and analyzing statistics, there will be a result of the findings to see if the relation between BI and SD is negative or positive with the hypothesis result.

The concept of BI and strategic decision are central in the world of business today, before many businesses have grown and the economy was at the boom. The advent of world economic crisis had a great impact on business and business had to slow down. Many employees lost their jobs as all fingers pointed at management for an inadequate decision taken caused by the shortage of BI. The impact of this new concept of BI has to be upheld because it has been seen as having a great impact on strategic decision-making carried out chiefly by managers at different levels of operation in the companies. In Iraq, the concept of BI has been embraced by companies especially the four companies under research in this study. Although these companies are moving on, more need to be done on the domain of decision-making. Decision-making is obviously in the hands of managers who need expert knowledge in BI. Knowledge gained in BI will have a great impact on strategic decision making in all companies.

Business intelligence

Nowadays, business around the world confronts different matters as technology, the speed of communication, competitors, develops knowledge. This aspect had to show the threats and opportunities that occasionally most organizations are facing a terrible situation. It is happening in a local business environment and global environment, which lead to intensive and extensive competition. Most of the corporations try to focus on the various efforts and improving strategies for keeping in the competitive situation. Currently, there has lots of economic information from an organization, which has been gathered in order to take the best decisions as possible in the quick period (Misner et al 2002). Therefore BI refers to be the system that would include combining data, the management knowledge and the data storage and finally involves analytical tools to offer the information, which is complex and competitive to the decision makers and planners. There is an interest for those who believe that BI have some tools and technologies, then the process that addresses converting data into information to put information into knowledge and plans then using for the best business, called that optimize business (Eckerson 2007).

In this explanation, BI is engaged with the process of decision-making by converting data into information, which has used for varying analytical tools. The data warehouse defined business intelligence as a process of organization which includes technologies and knowledge tools that needed to transform data into information, then into knowledge and finally into plans, that could be take advantages of profitable business action (Loshin 2012). Business intelligence can also be described as a factor for analyzing a large amount of data and operating those data as much as it can. At the same time, BI presents a set of reports to the higher levels, which is able to get an advantage and condensing the essence of data put it into business action (Cui et al 2007). The opinion of BI would make it clear that as a method or the way for getting better business performance by providing study assists for an executive for who is going to make the decision. When the term of BI contains lots of meaning and using for many purposes as its definition may different from the comprehensive term. For all decision support systems that linked concepts for serving the knowledge of management like market intelligence and competitive intelligence (Popovič et al 2010). BI could be viewed like it is turning claims as a larger part of knowledge management. Whereas an organization has the ability to use effective internal and external information capital, the organization helped by knowledge management for the insight it experiences. According to (Herschel and Jones 2005), the general term of business intelligence consists of knowledge, platform, tools, application, and technology. It is able to support finding the process to business data and it relation. It also provides executive just in time and exacts better understanding from information in business, which could be informed. The form business decision, in real time defined the term BI as an operation for collecting data from internal and external information in business after that analyzing, preparing and using in the business action (Okkonen et al 2002). The environment of BI within an organization is endeavoring to design that leads to a successful implementation of the business intelligence system. It is defined as the system of information for getting better quality of information about decision-making analysis. Such analysis uses this source for guiding and achieving business toward goals into the organization. In another means, the system of business intelligence uses the information produce and business analysis as it helps users. This will only depend on understanding the business operation improvement (White and Davis 2008). Sometimes the system of business intelligence represents a broader technology term, which is containing the management knowledge and data mining to use of the decision system support.

The solution of BI consists some ways, which can be introduced such as statistical analysis, online analytical process, reporting, and forecasting. It can be explained that business intelligence also is neither a system nor a product which could be architecture as a set of process for supporting decision making, which applications with database and provide the community of business is easy to access business data (Moss and Atre 2003). The business intelligence pointing philosophy managerial as it tools could be used to organize and manage just in time and it also helps organization for gathering business information by being more effective in business decision.

BI System Infrastructure flexibility

In today's rapidly change in business environment, there should have an effective and correct information that is not necessary only for success, as well as it is necessary for survival in a competitive environment. In the mid-90s, business intelligence as mentioned by Granter Group is a term of an umbrella, which contains infrastructure and tools. It also contains applications, which enable access and information analysis for improving and optimizing the decision and increasing the degree of performance (Gbosbal, and Kim 1986). Therefore BIS infrastructure flexibility is one of the important components of the dynamic capability of organizations. However, the capability of the organizations has been characterized by the ability of the organizations to integrate and reconfigure the threats and opportunities that organizations might confront in external environment. Undoubtedly, the BIS infrastructure flexibility is one of the best key factors of organizational capability and performance that is critical for the accurate and timely data and information that causes improved performance and decision-

making in the organization.

Nevertheless, BIS infrastructure includes the information and data which are interconnected and sufficiently flexible so that, BIS could be able to capture and analyses the most valuable assets raw data and information that lead to the best decision and improve performance in the light of increasing the capacity of the organization (Azvine et al 2005). Finally, according to (Hovi et al 2009) through the systems of BI, the fragmented information is integrated into an organization with that distributing process for supporting decisions so that it would be the strategic and tactical decision.

Data warehouse

The data warehouse is a new technical trend description of the latest concepts of information system field and this concept is gaining great importance of business applications. This is common especially in large organizations, which have a lot of branches and distributors because of an active role in the management of informatics resources and improve the decision-making. This is the basis which is doing data warehouse for achieving integration among the data of the organization which has published and distributed through different rules and treatments. The transactions and legacy system and preferred sources of external data, which are related to the business so as gaining integrated environment and unification for the historical and current data in the framework in one warehouse (Stair and Reynolds 2003). The data warehouse is the system of data storage, analysis for supporting decision making, through unification and integration, data organization and storage. After removing the shortage that has been detected, the unification and its standards in structure framework become the effective style in storage and thus return the data. It becomes a suitable place where managers can make a decision through using data warehouse and associated technique tools to diversified report generation. From preference and implementing complication analytically in order to reach the information and knowledge enormously from accumulated data in the organization (Saleem 2010).

Operations Extract, Transform, Load (ETL)

It's designed for tool extraction and integration of data from various sources based on the specific map extract and the process of integration, which is the necessity for transforming data. Data transformation is required from an organization regardless of how to store in an operational environment before it is transformed into the data warehouse (Westling 2008). Data integration technologies as a broad classification of technologies for extraction, transport, and load data into the target data warehouse which can extract, transform and load data (Hammergren 2009). It is one of the important of data integration technologies which has a series of application for extracting data collection from different sources and transforming them into data platform, then implementing a series of operation to prepared and carried over to the data warehouse.

Strategic decision

The first step was taken in the 1950's about strategic management development when the organization has developed into a systematic approach for identifying the future of business, how it's going to practice and where will organizations going to operate (Ansoff 1984). The strategy is a pattern in decisions, actions and important for the organization so that it includes some key areas which are characterized organization from others. In this case strategy is described as a set of decisions and actions which have led to strategy formulation and implementation it aims achieve organizational goals (Pearce and Robinson 1985). The basic function in any type of organizations must be carried out by managers and implement making decisions (Nooraie 2011). Each of organizations tries to improve decisions making in the best way.

However, organizations without decisions can't be success to achieve their goals which are planned for. The importance of decisions, actions returns to the style prevailing in organizations which is supposed to be a strategy and few key areas that consist of differentiation from others (Digman 1986). So that it could find many and different concepts of the strategic decision in literature and decision-making, with a constant process and consume time by decision makers. The basic point can be referred to managers to play a vital role in the strategic decision and, decision-making is most important in an organization. In recent years, decision-making had explained general behaviors based on selected groups in previous years from the preferred goals that indicate the aim of analyzing strategic decisions. The most authors important thought seem that strategic decision a central activity in the management of large and small organizations (Elbanna and Child 2007). Understanding the process of strategic decisions as an orderly process of gathering information from external and internal source, evaluating and processing information after transforming knowledge information into activities in management (March 1991).

According to Hofer and Schendel (1980) strategic decisions are non-routine, it has a specific importance especially for those who play in central roles that could be top management. The strategic decision also can be described as a range of strategic alternatives to reach the goals in the best way represented. It's also playing a role, which includes the responsibility of senior management and shows the interaction between an

organization and environment. It has reflected on the relationship that indicates the way in which organizations are managed (Ginsberg 1988) continue in which organizations use business in the future and this role depends on the strategic decision making. Strategic decision-making has been defined as a gradual and interdependent, which is formed by a variety of impacts contextual to the past events arising in present-day conditions and finally the future views (Quinn 1980). Strategic decision could be described as the mission statement, which contains goals and objectives established, in order to find the factors that have influenced the future of organizations and identify trends importance.

This indicates the strengths and weaknesses and has to explore the objectives of the strategy and implementation, which needs to keep on the implementation and finally effective evaluation. Streib (1992) said that strategic decision also can be described as choosing a range of strategic alternatives and that is trying to reach goals in the best way represented. It is playing a role that includes responsibility of senior management and shows the interaction between an organization and environment reflection.

Therefore, this relationship indicates the method that organizations are managed. It was proposed that strategic decision contains some points. It does include positioning of strategy, it has high risk, involves several functions in the organization and the representative which is considered the major part of decisions making in organization (Eisenhardt 1989). Moreover, strategy decision supposed to be infrequent decisions, which influence the health and survival of organization when it made by top management. In the way that strategic decision is recognized in-depth affecting ability, future, and the fate of the organization through responsiveness and compatibility between the decisions and environmental requirements. This makes sure that strategic decision is a decision, which deals with long-term variables.

These variables are related to organizational performance or related to the central importance in order to continue the success of an organization (Eisenhardt et al 1997). It would represent a special kind of management decisions in the absence of non-confirmation, which includes the decisions, and have relation to the complex problems.

Dealing with organizational objectives, its values, and impacts in different managerial levels taken when top management being of high importance requires a great mental effort of senior management and distinct. The experts and consultants are needed solve the problems to ensure proper and effective decision making (Johnson 1993). However the far-reaching decisions in this content are based on the strategic plans of objectivity and achieve the goals set then taken into account all the possibilities and consequences of the situation. It has mentioned strategic decision as it's a decision that identifies the organization's basic fate, general trends in the light of expected and unexpected variables that occur in the surround environment.

Model of strategic decision

The purpose of the model strategic decision-making could be explain and describe the strategic decision process, it would vary based on the idea of the organizations and there have been different from the conceptualization of the process decision making because it did the classification (Astley and Axelsson 1982).

The process of strategic decision would include the problems of decision existence which the decision maker has been understood to identify the opportunities accurately solve the problems so that, there have several issues to describe decisions which caused impediments to the decision (Cornescu, et al 2003). The model of strategic decision-making are divided into two basic models and made it different between the two models (Hitt and Tyler 1991). An analytical rational – model which has started a linear decision and the systematic process of decision, when a behavior management concentration in the pre-explanation goals. The rational decision could be described as a structure or the reasonable thought for the decisive action, therefore making the knowledge which has led to the optional and rational decision that able to support decision making in order to engage the specific open optional.

According to the decision which is related to the high value and the advantage of the tools of operations, the expertise and knowledge (Fahey 1981).The organizations would not be rationally perfect because of the limited information. Because of limited information organizations would not have the capability of addressing perfectly when the most basic of decisions are dependent on the rules of thumb that called the quality of limited information. This implies that organizations are institutionalized which the decision-making use its fragment and routines the process to making the management in the organization (Morgan and Smircich 1980). The basic phases and processes in the rational, analytical decision-making include identifying the problem, which could lead to goals of formulating, developing, selecting the alternatives which identify decision making. Furthermore, it supports clearly the experiential of research which most of the decisions are following the basic phases that include identifying the problems. After that development and selecting the suitable alternatives, then put it in the plan for making decisions in which case the decisions through different stages have to report. According to Simon (1977), when the situation of the organizations is going deeper, there need various paths for making decisions. Here, organizations participate four phases, which contain Intelligence, design, choice and implementation .

1. Intelligence

It points out the problem of identification, which happens in the organization. However, it shows the effect from the situation which occurs, at the same time as it has refers to the activity for gathering information to identify the problem and where the problem occurs with processing the information about the situation of potential decision then formulating the alternatives in the organization.

2. Design

This stage indicates the alternatives, which have to be involved in decision making as a solution. Those that have developed quickly in particular at this stage of formulating alternatives will describe the alternative identification to explore the need for the satisfaction that is related to the objectives of decision-making in the organizing process.

3. Choice

The choice is one of the important stages in selecting the best alternative among the alternatives, which are identified. Therefore the use information tools for detecting the threat and opportunities, which have been identified in the second stage that is designed, might also need the decision support system for development. Especially, when there are more alternatives and complex consequences there is need to use an analytical model more extensively in decision making.

4. Implementation

For completing the process of decision making, there needs for implementation, which this stage shows the role of manager and how to implement the decisions or make decisions. These stages depend on the reporting system which routine reports has been delivered in order to progress to a specific solution and the system also refers to reporting the difficulties which will be arising. Simon again described the rational decision, such as a multi- step process in order to choose among alternatives which one is the best according to logic and objective. The second model is external control which is point to the external environment that analysis strategic decision making success and concentrate the operations of strategic decision making which have associated with environmental circumstances. However, it was said that the model has been grown through two bases that are separate and supportive which largely includes the organization's theory and the organization's economy of industrial organization. The theory of organization has assumed that the environment looks like a source from the contingency of critics, which also suggested that contingencies are the turbulence of environment, have included many large influences on organizations. The economy of industrial organization and theory of organizations are close to each other in conceptual thought while industrial economics suppose to the structure of this industry to identify the profitability of significance in the industry (Hirshleifer 1980).

The influential factors which have served by the environmental factors are vital as it occurs in strategic decision making (Barney and Ouchi 1986). More often, the perspective of this model has been considered inevitably higher deterministic constrained the strategic decision thought the external environment have been considered (Bourgeois and Brodwin 1984).

Effectiveness of strategic decision-making

Organizations are continuously making the decisions at every stage and at every level so that the ranges of decision making from the strategic decision, while to the managerial decisions and also to the routine of operational decisions. Whereas in business: the decision-making is about choice, selection or compromises to achieve the goals of business. However, the decision-making is not always about the right choice of identification and concessions.

Whether it has to be turned into the work, which is not the decision, it is a good start (Drucker 1967). Thus, the effect of the decision could be described as a process of what and which alternative is going to be chosen in order to manage and implement the purpose which can achieve the business objectives. The systematic process resulting in the effectiveness of decision, with definite elements of decisions, would clearly treat the sequence - distinct from the steps. The effective decision refers to achieving the goals of the organization which is trying to achieve the acceptable level of proportionality between the methods and the goal within a certain circumstantial data. The process of decision making is the backbone of management. There are predictable rules by which to a degree of proportionality can be achieved between the objectives and the means of a decision made at a time under the shade of certain environmental data, which includes:

1. The level of accuracy and adequacy of information available for the purposes of that resolution. The ability to administrate levels and analysis derived from the experience and understanding of who makes the decision.
2. The level of intellectual creates conflict through participation to reach the most appropriate decisions.
3. The degree of difficulties from reduction that has been faced by the decision-making of the environment when it was described as effectiveness of decision as a process which was used to reach the decision making or supposing as the decisions output.

Methodology

The overall of the methodology is pointing about some ways in order to organize and analyze data, which is dependent on the nature of the research question, and there should be a precise explanation, according to the methodology. Thereafter the research model descriptive is a kind of quantitative in nature which involves for collecting data in order the hypothesis and nail hypotheses would be test or answer the questions for the current statues of the topic of the research, The Impact of Business Intelligence on Strategic Decision Making, Therefore, the survey research has been chosen by the research design for this study. The survey is endeavoring to collect the data from the managers of the population to determine the current statues of population, which consist one or more variable with respect.Building the study problem of the research and its goals are those managers who make up the upper management and middle management. The population under study is divided into four communication companies. It includes: Asia cell, Zain, Newroz telecom and Goran net where located in different places in Iraq, arranged according to how they are making strategic decisions and the impact of business intelligence on it. To increase credibility, it's important to choose the sample, which represents the population. Participation managers from four communication companies in Iraq included top managers, mid-level managers that had chosen 120 managers. Data collection is manner of analysis and program used in the current study, which includes two types: secondary source that contains book, journal, articles and thesis to write the previous studies of the research. The primary source which include survey questionnaires because of the questionnaires suitable for this research it has been conducted through dividing questionnaires to those companies, Asia, Zain, Newroz and Goran for collecting sufficient information.

Data analysis

The sample was composed of 97 from 120 managers in the four companies being Asia, Zain, Goran and Nawroz. This chapter will include the result of data through the application of statistical procedure, which were manipulated and interpreted based on the response of the sample to the test. The study was conducted using a descriptive statistics such as (frequency, percentage, mean, standard deviation and t-test) and inferential statistics such as (correlation coefficient, regression analysis and t-test) in order to investigate the main relationship between variables.

Table 1 Distribution of the Sample According to Gender

Gender	Frequency	Percentage %
Male	82	84.5
Female	15	15.5
Total	**97**	**100.0**

It can be seen in the table (1) that 84.5% of the total responses were male: otherwise merely 15.5% were Female.

Table 1.1 Distribution of the Sample According to Age

Age distribution	Frequency	Percentage %	Mean ± S.D
Less than 30	16	16.5	
30-39	62	63.9	
40-49	18	18.5	35.2 ± 5.8
50 and more	1	1.1	
Total	97	100.0	

It is noticed in the table (1.1) that of the total responses, 63.9% were age of 30 to 39 years old, 18.5% were age of 40 to 49 years old, 16.5% were age of less than 30-39 years old, merely 1.1% were age of 50 and more years old.

Table 1.2 Distribution of the Sample According to Education Level.

Education level	Frequency	Percentage %
High School	9	9.3
Bachelor	73	75.2
Master	15	15.5
PHD	0	0.0
Total	97	100.0

As it is shown in the table (1.2) that of the total respondents, 75.2% had bachelor degree, 15.5% had master degree and also 9.3% had high school. However, 0.0% of them were PhD degree.

Table 1.3 Distribution of the Sample According to Professional Experience.

Professional experience	Frequency	Percentage %
5 and less	13	13.4
6-10 years	35	36.1
11-15 years	34	35.1
16 and more	15	15.5
Total	97	100.0

It is clear in the table (1.3) that 36.1% of the total participation had 6 to 10 years of professional experience, 13.4% of the total sample had 5 years and less of professional experience. Moreover, 35.1% of them had 11 and 15 years of professional experience. Finally, merely 15.5% of total respondents had 16 years and more of professional experience.

Table 1.4 Distribution of the Sample According to Time Working on the Company.

Time working on the company	Frequency	Percentage %
5 and less	33	34.0
6-10 years	34	35.1
11-15 years	28	28.9
16 and more	2	2.0
Total	97	100.0

As it shown in the table (1.4) 35.1% of the total participation have been working during 6 to 10 years, 34.0% of total sample have been working during 5 years and less. In addition, 28.9 % of them have been working during 11 and 15 years. Finally, merely 2.0% of total responses have been working during 16 years and more.

Table 1.5 Distribution of the Sample According to Job Tittle

Job tittle	Frequency	Percentage %
Top-level management	14	14.4
Mid-level management	83	85.6
Total	**97**	**100.0**

It can be seen in the table (1.5) that 85.6% of the total response have been working as mid-level management, while 14.4% of them have working as top-level management.

Table 1.6 Correlation Coefficient

		Strategic Decision	Type of BI tools	Influencing of factors	Perceived value of BI	respect to BI	BI use	BIS
Strategic Decision	Pearson Correlation	1	.368**	.358**	.429**	.335**	.467**	.554**
	Sig. (2-tailed)		.000	.000	.000	.001	.000	.000
	N	97	97	97	97	97	97	97
Type of BI tools	Pearson Correlation	.368**	1	.110	.251*	.144	.302**	.326**
	Sig. (2-tailed)	.000		.282	.013	.161	.003	.001
	N	97	97	97	97	97	97	97
Influencing of factors	Pearson Correlation	.358**	.110	1	.580**	.446**	.449**	.496**
	Sig. (2-tailed)	.000	.282		.000	.000	.000	.000
	N	97	97	97	97	97	97	97
Perceived value of BI	Pearson Correlation	.429**	.251*	.580**	1	.569**	.525**	.419**
	Sig. (2-tailed)	.000	.013	.000		.000	.000	.000
	N	97	97	97	97	97	97	97
respect to BI	Pearson Correlation	.335**	.144	.446**	.569**	1	.319**	.453**
	Sig. (2-tailed)	.001	.161	.000	.000		.001	.000
	N	97	97	97	97	97	97	97
BI use	Pearson Correlation	.467**	.302**	.449**	.525**	.319**	1	.403**
	Sig. (2-tailed)	.000	.003	.000	.000	.001		.000
	N	97	97	97	97	97	97	97
BIS infrastructure flexibility	Pearson Correlation	.554**	.326**	.496**	.419**	.453**	.403**	1
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	
	N	97	97	97	97	97	97	97

It can be seen in the table (1.6) that there were statistically significant relations between all items because p-value for all items was less than 0.05. There were strongly positive relationship between Business Intelligence and Strategic Decision.

Table 1.7 Relation business intelligence parts and Strategic decision making

Variables	Strategic Decision			
	Unstandardized Coefficients		Test	
	B	Std. Error	t	Sig.
Constant	2.008	0.204	9.851	0.00
Type of BI tools	0.059	0.034	3.521	0.048
influencing of factors	-0.007	0.051	-0.14	0.889
perceived value of BI	0.062	0.056	1.09	0.277
quality of information with respect to BI	0.006	0.049	0.12	0.898
BI use	0.095	0.046	2.058	0.042
BIS infrastructure flexibility	0.176	0.049	3.57	0.001

It is clear in table (1.7) that the parameter for α (2.008) indicates the predicted consumption when all explanatory variables are equal to zero and also the β parameters indicate the average change in consumption that is associated with each unit increase in the explanatory variable. For instance, for each unit increase of type of BI tools then Strategic Decision increases by 0.059. There was statistical significance because the p-value of t-test is less than the common alpha 0.05. In addition, for each unit increase of BI use then Strategic Decision increases by 0.095. There was statistical significance because the p-value of t-test is less than the common alpha 0.05. Moreover, for each unit increase of BIS infrastructure flexibility then Strategic Decision increases by 0.176. There was statistical significance because the p-value of t-test is less than the common alpha 0.05. On the other hand, other independent variables such as (influencing of factors, perceived value of BI and quality of information with respect to BI) were not statistical significance relationship with Strategic Decision because the p-value of those were greater than the common alpha 0.05.

Table 1.8 the Relationship between Business Intelligence and Strategic Decision

Variables	Strategic Decision								
	Unstandardized Coefficients		Test				Model Summary		
	B	Std. Error	T	Sig.	F	Sig.	R-Square	R	Adjusted R Square
Constant	1.915	0.207	9.2	0.00	56.4	0.00	0.62	0.61	0.60
Business Intelligence	0.417	0.055	7.5	0.00		0.00			

It can be seen in table (1.8) that the result of determination of variation (R- Square) is (0.62) which means that 0.62% of the total response variable were explained by the explanatory variables. Moreover, the parameter for α (1.915) indicates the predicted consumption when all explanatory variables are equal to zero and also the β parameters indicate the average change in consumption that is associated with each unit increase in the explanatory variable. For instance, for each unit increase of Business intelligence then Strategic Decision increases by 0.417. There was statistical significance because the p-value of t-test is less than the common alpha 0.05. Moreover, the F-statistic is equivalent to the t-statistic ($F = \sqrt{t}$) which is often quoted in statistical output). Finally, the result of correlation coefficient was 0.6. This means that the relationship between Strategic Decision and Business intelligence were strongly positive.

Hypotheses tested

1. Business intelligence could be able to improve the efficiency and effectiveness in strategic decision making under information quality in four communications companies at level (α =0.05).
2. The type of BI tools could be able to improve the efficiency in strategic decision making under information quality in four communications companies at level (α =0.05).
3. Influencing of factors could not be able to improve the efficiency in strategic decision making under information quality in four communications companies at level (α =0.05).
4. Perceived value of BI could not be able to improve the efficiency in strategic decision making under information quality in four communications companies at level (α =0.05).
5. Quality of information with respect to BI could not be able to improve the efficiency in strategic decision making under information quality in four communications companies at level (α =0.05).
6. BI use could be able to improve the efficiency in strategic decision making under information quality in four communications companies at level (α =0.05).
7. BIS infrastructure flexibility could be able to improve the efficiency in strategic decision making at

level (α =0.05).

Result

As expected, the results of simple and multiple regressions provided evidence that the relationship between business intelligence and strategic decision were strongly positive and statistically significant. In more detail, for each unit increase of business intelligence the strategic decision increase by 0.417. In the first hypothesis, the null hypothesis is rejected otherwise the alternative hypothesis is accepted meaning business intelligence could be able to improve the efficiency and effectiveness of the SDM. In addition, the results of the relationship between parts of business intelligence and decision making were different such as type of business intelligence tools. Business intelligence use and BIS infrastructure flexibility were having statistical significant relationship with decision making. Meaning types of business intelligence tools, business intelligence use and BIS infrastructure flexibility could be able to improve the efficiency of the SDM in this environment.

However, the influence of factors, perceived value of business intelligence and quality of information with respect to business intelligence were not having statistical significant relationship on SDM. This means that the influence of factors, perceived value of business intelligence and quality of information with respect to business intelligence could not be able to improve the efficiency of the SDM in this environment.

Conclusion

The strength of technology as a tool makes it clearer to understand and helps managers to achieve the organizational goals which recruit work on the proper and effective phase. It happened as desired by all aspects of these processes, the available data that is converted to information is necessary for decision making, senior management, board and even mid-level managers need it, too. It is maintained that business intelligence is one of the most important and most desirable aspects of the communication industry in the business world especially when it comes to decision making and strategic decision in the domain that it had adapted to the rational approach in its literature and assessing the effects on SDM. Decision making which has higher quality depends on the analysis of the information and then it takes appropriate decision in the interest of labor and improves the performance in making strategic decisions. To that effect, the material appeared in style and how these establishments are intended to do business which is the application of BI with the aim of achieving greater profitability in more communities in the field of strategic decision making. Based on the findings, it was realized that the degree of the relation between BI and SDM is deep and included some features that contained recognizing strategy decision making and conducting the deep description of the process of SDM.

The result clearly supported the relation between BI and strategic decision making which was positive and met the main purpose of the study, as expected an increase of units in business intelligence would be an a increase in strategic decision making units and in order to upsurge the units BI the companies should focus on the main key factors which are found and includes Data warehouse, Data mining, OLAP and Dashboard to increase business intelligence in the main that could be able to collect large amount of data and although by using these tools analyze the data and transform the data into information then put it into knowledge that decision making depends on. In contrast, in previous BI as the system used to support the SDM and improved the efficiency and effectiveness in other industries through other factors such as realization of the cost, process and optimality therefore it illustrated that the relation between BI and SDM were positive.

In more details in this study BI led to different results such as the BIS infrastructure flexibility having a positive relation with strategic decision making through the information which is interconnected and sufficiently flexible that took the most valuable assets of raw data to decision making. It also raises the capacity of the company's performance through integrate, configure threaten and opportunities in the domain confronting the external environment, therefore it improved the efficiency of strategic decision making in the companies. BI use took it to extract the key value of performance indicator and cares to share the insights of the data within the companies and usually collects business data from internal and external that indicated how the organizations able to generate the knowledge and ultimate value in the best way, Therefore, using BI could be for empowering the decision makers in all levels of the organization and make the better strategic decision when BI Use improved the SDM.

Thereafter the needs of companies to transform data into information for the strategic decision making are increased, however it's important to demonstrate that BI tools have positive relation with strategic decision making in the light of BI tools confirming to decrease the lack time, avoid the costs and reduce risk although BI tools used to share and compare the different amount of data and information in order to make strategic decision that improved the efficiency of strategic decision making in the companies. Despite of the fact in previous BI tools could be used to as a major key for the competitive advantage sustainable in strategic decision making.

However some parts couldn't able to improve the efficiency of strategic decision making such as perceived value, influencing factor and quality information in this environment which companies work on, in contrast in previous spread it the quality information to be a major sources to acquire the knowledge in

competitive advantage in decision making and used perceived value of business to implement the system for participating so that the fulfillment in the organization even used the BI as a system to support the strategies, vision and how business value delivered from the system it's influencing the solution when most of the problems found in integration of the BI and decision making.

After all, managers would need to justify the investments in business intelligence or managing the process of BI and value the contributions of BI greatly in order to decrease the uncertainty in decision making. Also, devalue the author's contribution as fulfilling shared understanding of the symbolic value of the business intelligence because its outputs are traditionally viewed as functionalist and it has been guessed that BI leads to make the best decision. It would also lead to failure to make a better decision at this point which indicates that the outputs of BI has failed or it could not use the process of decision correctly for making the better decision.

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