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UNIVERSITY OF GAZİANTEP  
GRADUATE SCHOOL OF SOCIAL SCIENCES  
DEPARTMENT OF BUSINESS ADMINISTRATION

IMPACT OF INTELLECTUAL CAPITAL ON  
ACHIEVING COMPETITIVE ADVANTAGE: A STUDY  
OF NON-GOVERNMENTAL UNIVERSITIES IN  
ERBIL, IRAQ



**MASTER'S THESIS**

FAKHRALDIN BAYZ ALI

Supervisor: Assoc. Prof. Dr. İbrahim Halil SEYREK

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Fakhraldin Bayz ALI

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Doç. Dr. Zekiye ANTAKYALIOĞLU  
SBE Müdürü

Bu tezin Yüksek Lisans tezi olarak gerekli şartları sağladığımı onaylarım.



Prof. Dr. Arif ÖZSAĞIR  
Enstitü ABD Başkanı

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Tez Danışmanı

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Jüri Üyeleri

İmzası

Doç. Dr. İbrahim Halil SEYREK

Doç. Dr. Tuba BÜYÜKBEŞE

Yrd. Doç. Dr. Özlem YAŞAR UĞURLU



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Fakhraldin Bayz ALI

Date of Viva: 24.04.2017


Approval of the Graduate School of Social Sciences

  
Doç. Dr. Zekiye ANTAKYALIOĞLU  
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master.

  
Prof. Dr. Arif ULŞAGIR  
Head of Department

This is to certify that I(we) has(have) read this thesis and that in my(our) opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master.

  
Assoc. Prof. Dr. İbrahim Halil SEYREK  
Supervisor

This is to certify that we have read this thesis and that in our opinion it is fully adequate by unanimous vote/a large majority, in scope and quality, as a thesis for the degree of Master.

Examining Committee Members:

Signature

Assoc. Prof. Dr. İbrahim Halil SEYREK

Assoc. Prof. Dr. Tuba BÜYÜKBEŞE

Asst. Prof. Dr. Özlem YAŞAR UĞURLU

  
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## ÖZET

### ENTELEKTÜEL SERMAYENİN REKABET AVANTAJI ELDE ETMEYE ETKİSİ: ERBİL'DEKİ ÖZEL ÜNİVERSİTELER ÜZERİNE BİR ÇALIŞMA

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Bu çalışma rekabet avantajı elde etmede entelektüel sermayenin etkisi üzerine odaklanmıştır. Çalışma, Irak'ın Erbil şehrindeki özel üniversitelerde entelektüel sermayenin rekabet avantajı elde etme üzerindeki etkisini belirlemeyi hedeflemiştir. Bu amaçla, özel üniversitelerde görev yapan 85 katılımcıdan bir anket yardımıyla veri toplanmıştır. Toplanan veriler SPSS yazılımı kullanılarak analiz edilmiştir. Analiz sonuçları entelektüel sermaye ile rekabet avantajı arasında istatistiksel olarak anlamlı bir ilişki olduğunu göstermektedir. Bu çalışmanın sonuçlarına dayalı olarak rekabet avantajı elde etmede üniversitelerin entelektüel sermaye üzerine odaklanması gerektiği sonucuna ulaşılmıştır. Ayrıca, entelektüel sermaye üniversiteler için stratejik bir kaynaktır ve günümüzün dinamik ve değişken ortamında başarılı olmak için korunması gerekmektedir.

**Anahtar Kelimeler:** İnsan Entelektüel Sermaye, Rekabet Avantajı, Üniversiteler

**ABSTRACT****IMPACT OF INTELLECTUAL CAPITAL ON ACHIEVING  
COMPETITIVE ADVANTAGE: A STUDY OF NON-GOVERNMENTAL  
UNIVERSITIES IN ERBIL, IRAQ**

ALI, Fakhraldin Bayz

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This study focuses on impact of intellectual capital in achieving competitive advantage. The study aims to determine the impact of intellectual capital in achieving competitive advantage in the non-governmental universities in Erbil city, Iraq. For this purpose, data were collected from 85 respondents of non-governmental universities using a questionnaire. The collected data were analyzed using SPSS software. The results of the analyses show that is a statistically significant relationship between intellectual capital and competitive advantage. Based on the study it is concluded that universities should focus on intellectual capital as it is an important source in achieving competitive advantage. Also, intellectual capital is a strategic resource for universities and should be protected to be successful in today's dynamic and changing environment.

**Key words:** Intellectual Capital, Competitive Advantage, Universities

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## **SECTION ONE INTRODUCTION**

### **1.1. INTRODUCTION**

The current century experiences tremendous developments in various fields. Business and the economy are among these fields that became big challenges for business organizations. The most obvious of these development sides are globalization and the shift towards a knowledge economy. This economy in which land, labor and capital are not the only the basic resources, but also 'knowledge' appeared as a fourth element as a new type of capital that is based on knowledge and experience. This capital is called "The intellectual capital", and it should be renewed and developed constantly.

The Intellectual Capital can help many firm or institution to achieve excellence and enhance its competitive position, and therefore institutions should work to achieve competitive advantage through their attention toward intellectual capital.

We will try through this intervention to identify the intellectual capital and the most important components and measurable indicators, highlighting the importance of intellectual capital in achieving the competitive advantage of the organization. Therefore; we have tried to address the following problem: How does the intellectual capital contributes to achieve competitive advantage in the non-governmental universities?

We tried in this study to answer the above question through the following:

- Explaining the concept of intellectual capital.
- Demonstrating the most important components and indicators for measuring and evaluating the intellectual capital.
- Explaining the relationship among intellectual capital and competitive advantage in the nongovernmental universities.

The contemporary economy is not only concerned with physical assets such as buildings, machinery and capital, but it also pays equal attention to the non-physical asset of intellectual capital; this capital which is the real wealth of the institution and its key to survive and compete in the market.

### **1.1.1. Problem Statement**

The goal of nongovernmental universities (private universities) is to survive and expand, to fulfill this goal, nongovernmental universities are constantly seeking to find methods that enable them to achieve competitive advantage. Therefore, they are focusing on intellectual capital as one of these methods. Intellectual capital can give nongovernmental universities competitive advantage in many areas such as cost, differentiation and flexibility. These factors interact to give new vision. Herein, if intellectual capital is not used properly, we will be in danger of being surpassed by our competitors. In short, the research problem can be highlighted in the following questions:

- 1 - Do nongovernmental universities focus on non-tangible resources such as intellectual capital more than tangible resources?
- 2 - Do nongovernmental universities realize the value of the intellectual capital that they possess?
- 3 - Do non-tangible resources such as intellectual capital affect the competitive advantage of nongovernmental universities?

### **1.1.2. Importance of the Study**

Research acquires its importance from the following:

- 1 - The importance of intellectual capital in being a contributor to discover and strengthen the cognitive and organizational capacities of individuals, and enhancing the organizations' strength points and being a deferent than other competitors.
- 2 - Draw the attention of managers in the universities to the fact that any institution cannot achieve its objectives efficiently without strong understanding of the intellectual capital and how manage it.

3 - Need to maintain the intellectual capital and how to invest it in the form that achieves innovative and creative activities that support organization competitive advantages.

4 - The fact that this academic research is an attempt to give attention on the intellectual capital and its increasingly important in business organizations and the economy in general, and how they can develop and maintain it to achieve competitive advantages and support through it.

5 - The importance of the empirical side, which shows patterns of enhancing the intellectual capital in non-governmental universities, with explanation of strengths and weaknesses of them, as well as the ways in which in the intellectual capital can be developed and maintained.

### **1.1.3. Objectives of the Study**

This research objectives to identify the availability of human intellectual capital and to realize the extent of interest in non-governmental universities about that subject, moreover, know about its role in the development of creativity in these universities, aiming to add value and achieve competitive advantage through that, and that by trying to interpret the correlation between various dimensions of intellectual capital and the competitive advantage of non-governmental universities in determined study.

The objectives of this study is to test the impact of intellectual capital in competitive advantage in nongovernmental universities through:

1. Measure the impact of Human Capital in competitive advantage.
2. Measure the impact of Structural Capital in competitive advantage.
3. Measure the impact of Relational Capital in competitive advantage.

### **1.1.4. Research Model**

The research model is shown in the following figure.

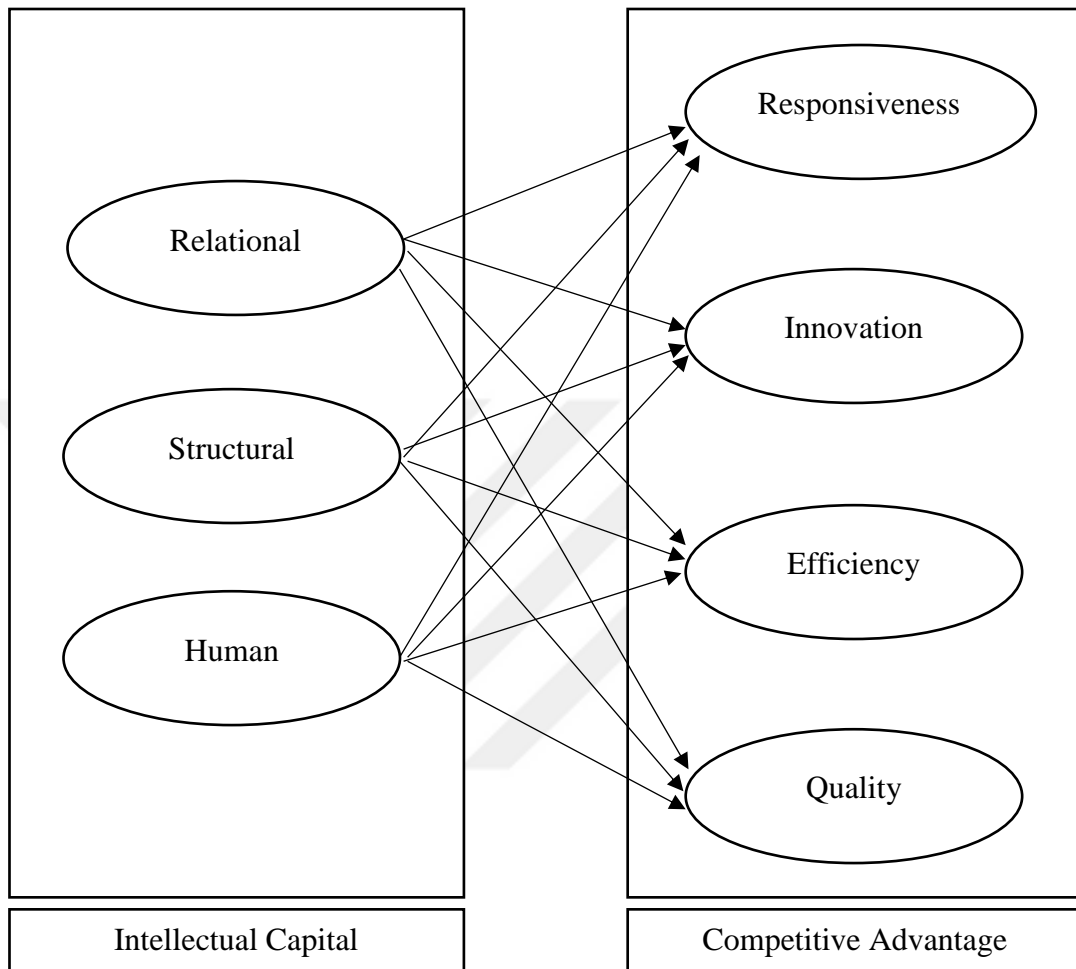


Figure 1. Research model

### 1.1.5. Hypotheses of the Study

The following hypotheses will be tested in the study.

H1: There is a positive effect of Relational Capital on Competitive Advantage

H1a: There is a positive effect of Relational Capital on Responsiveness.

H1b: There is a positive effect of Relational Capital on Innovation.

H1c: There is a positive effect of Relational Capital on Efficiency.

H1d: There is a positive effect of Relational Capital on Quality.

H2: There is a positive effect of Structural Capital on Competitive Advantage

H2a: There is a positive effect of Structural Capital on Responsiveness.

H2b: There is a positive effect of Structural Capital on Innovation.

H2c: There is a positive effect of Structural Capital on Efficiency.

H2d: There is a positive effect of Structural Capital on Quality.

H3: There is a positive effect of Human Capital on Competitive Advantage

H3a: There is a positive effect of Human Capital on Responsiveness.

H3b: There is a positive effect of Human Capital on Innovation.

H3c: There is a positive effect of Human Capital on Efficiency.

H3d: There is a positive effect of Human Capital on Quality.



## **SECTION TWO LITERATURE REVIEW**

### **2.1. INTELLECTUAL CAPITAL**

The concept of "intellectual capital" was introduced by "Galbraith in 1969", for the first time in business and economic area. As a usage, the Popularity of intellectual capital of investigation rooted is not much old. It took its popularity after the announcement of an article written by Stewart in Fortune Magazine, then, he tried to announce it as the amount of manpower' knowledge and ability that could enhance the organization' competitiveness. "Initially, the difference among book value and market value of companies is considered as intellectual capital". (Kamath, 2007) states that yet, from different background researchers have tried to make a specific definition to concepts of "Intellectual capital" in their own words. However, there is no agreement can be seen about the specific definitions of intellectual capital.

In the light of the knowledge economy, intangible assets have become the mainstay of its strategic support for organization wealth and prosperity, and that the success of organizations in the acute competition environment has become dependent on the value of these assets and Strategy management, Because of their active role in the recruitment of the capabilities of employees and their skills and experience in strengthen the competitiveness of enterprise and create value. Thereby, Researchers have dubbed this intellectual capital assets Term. (Stewart, 1997, p5)

This chapter aims to identify about the concept of intellectual capital as well as to know the components and characteristics, moreover, highlighting its importance and its roles and development in the organization. For this purpose, this chapter it has is divided into eight sections which discuss the following topics:

The concept of intellectual capital, intellectual capital definition, the importance of intellectual capital, elements and components of intellectual capital,



intellectual capital characteristics, intellectual capital management, intellectual capital roles, intellectual capital development.

### **2.1.1. The Concept of Intellectual Capital**

Most Organizations realized the important fact, which is that its real value based on something that may be more important than the tangible capital, which today is called the intellectual capital, which is knowing how, creativity of workers, and its relation with customers as well as the knowledge and skill of the staff, the organization's culture, its organizational processes, and patents invention, It includes all the technical, moral, cultural and mental capabilities available to organizations that operate at the level of society as a whole, Saad Ali Anzi (2009,p112), it is worth mentioning that at present time intellectual capital has become the clearly seen in the financial, educational and consulting organizations.

The concept of intellectual capital has addressed by many researchers and writers, including (Yahdih, et al, 2004) defined as amount of employees in organization who enable the organization make intellectual contributions that enable the organization to increase productivity and achieve high level performance of budget compare to similar organizations. While (Stewart, 1997, p57) sees as practically emerging knowledge into and can provide organizations some benefits, because in current time those knowledge represent a competitive weapons. Similarly, Sveiby(1997, P11) defined intellectual capital as a corporate strategy and important for organizations including the knowledge and skills of workers, and the culture and value of the organization, the non-material asset of the organization. It has been known by Bowen (1998) intellectual capital as raw intelligence, owned by a group of people working in the organization, which contributes to reduce and remove unacceptable results and ensure the success of organizations.

According to the opinion of Kelley (1998), the intellectual capital is the workers who are genius and masterminds who are difficult to find a substitute for them. Based on the opinion of Hansen (1999), the intellectual capital is "a competitive asset in the process of creative development and strategic based on creativity, which is the key that leads to survival in a changing work environment quickly". Saad Ali Anzi knew (2009.p 117) intellectual capital as a useful knowledge that can be used and invested properly for the benefit of the organization.

Salh (2001.p61) states that intellectual capital is part of the human capital of the organization which represent an elite of workers who have a range of cognitive and organizational capacity differ from others, that enable these capabilities to produce new ideas and develop of tradition ideas, there by enable the organizations to expand its market share and maximize their strengths and make the position where organizations capable of choosing the right opportunity.

Based on the previous concepts it can be said that intellectual capital: (Is a cure resource for the success of the organization and represents workers who have the expertise, skills and knowledge that gives the organization a competitive advantage, which is something precious and invisible, through it organizations can configure a fortune without showing on the balance sheet)

### **2.1.2. Definition of Intellectual Capital**

"Generally, intellectual capital may be regarded as an intangible asset which comes from the disbursements on advertising (marketing), training, startup, research and develop activities, and human resource development disbursements. Organizational structure and process, brand names, copyrights, franchises, future interests, licenses, operating rights, patents, record masters, secret processes, trademarks and trade names are also considered as intellectual capital. In the following section few explanations of the term 'intellectual capital' is presented".

According to Itami (1991) "intangible assets" are invisible assets that represent a huge number of activities including technology, brand image, consumer trust, Management skills and corporate culture.

Hall (1992) defines "intangible assets" "as value bikers that transmutation productive Resources into value added assets." He divides IA into two classes:

- (1) Intellectual property
- (2) Knowledge assets".

Boudreau and Ramstad (1997) labeled that Intellectual Capital "is closely related to human resource administration that is requested by the organization to provide the Essential impetus for future development and grow".

Schneider and Samkin, (2007) prescribes "intellectual capital as the economic value of two classes of intangible assets of a corporation: (1) structural capital and (2) human capital. Structural capital can be further partitioned into internal and external capital". "Intellectual capital is the value of companies

intangible assets that aren't reflected on the balance sheet". (Mousavi & Takhtaei, 2012)

From the above mentioned definitions it is clear that IC is a set of attributes that bring Future benefits to the organization. Such set of attributes are generated from the expenditures of the organization in various developmental activities. However, from the recognition for accounting and reporting purpose most of them are expensed as they are incurred and only those are quantitatively identifiable or externally generated are reported in the balance sheet. From the above discussion it appears that:

(A) Intellectual capital cannot stand by itself, and hence, it cannot be either identified or valued separable from other assets.

(B) It is the outcome of the network impact of utilization different intellectual, human and structural source.

For the purpose of this study intellectual capital is considered as intangible and nonmonetary assets owning physical presences and procreates future importance to the organization.

### **2.1.3. The Importance of Intellectual Capital**

Intellectual capital Increasingly important at the instant, especially with the growing challenges posed by globalization, Organizations should promote and development the competencies and skills of their employees, so the organization must be well aware of how to utilize These important characteristics for building a strong intellectual base through which it can cope with the intense competition in the Business environment, following it will come with the importance of intellectual capital. (Hejan, 2007)

What make the twentieth century defer is the power of emergence of knowledge, which is an important factor that gives the organization the ability The continuity and possession of competitiveness, and there the organizations and governments began to take into account the subject of building a knowledge base and paying enough attention to The importance that they deserve, the need to possess the knowledge and how to manage them, moreover, the resulting is the intellectual capital And the organization that is well aware of how to own, manage, measure intellectual capital, Here the role and importance clarify as follows:

- Helps in the creation of new knowledge.
- Helps increasing the efficiency of utilizing assets and achieve higher productivity and better customer's service.
- Is the most important source of profitability and competitive mainstay of the organization, through it organizations achieve competitive advantage.
- Is an important base in building smart organizations, through the provision of genius minds that possess intelligence and ability to invest other resources and harnessed for the benefit of their organizations aiming to expand the market share.
- Similarly, to others Azm Ali Badarna illustrated the importance of intellectual capital in:
  - Intellectual capital is a real investment in knowledge and information that have the ability to serve the integrated system.
  - It scientific strength which capable of innovation, change and renewal.
  - It useful knowledge and skill, that can be used and utilized in the organization, an important investment long-term return and it needs enough attention.

The importance of intellectual capital identified by (Johansson et .. al, 2004) the as follows:

- Gives the organization capabilities and competencies that lead to its success
- provide organization management manage the work of the organization based on the intellectual assets and have a strategic choice to proper use in the light of the nature of the opportunities and the external environment.
- It the primary weapon of the organization, because intellectual assets represent the hidden force that ensures survival and continuity of the organization.
- Intellectual capital is able to create fictional wealth by being able to registering patents and this has been confirmed by research that dealt with knowledge capital.

In today's business knowledge represents an important source to gain competitive advantage in the markets.

From the above intellectual capital can be derived strategic role to maximize the value of the organization, it is a vital and core assets and has the power to influence and change all the organization's activities, in addition, it is considered a pillar key of competitive advantage in the organization also the cause of achieving

organizational efficiency, and attract customers and strengthen their loyalty, as well as it can increase the innovative capacity of the organization.

#### **2.1.4. Elements and Components of Intellectual Capital**

The authors and researchers disagreed about the number of intellectual capital elements, there are many researchers who set out four elements, while others mentioned more than that. According to Miller (1998) the intellectual capital elements can be divided to (creation of intellectual capital, maintaining intellectual capital, stimulate intellectual capital and customer consideration), based on the opinion of Dzinkawski (1999) intellectual capital is the (creation of intellectual capital, patents, the companies imitating/copy, and customer consideration), while Obaid (2000) sate that the intellectual capital elements are ( attract intellectual capital, creation of intellectual capital, patents, maintain intellectual capital, stimulate intellectual capital, and customer consideration)

There is an agreement between Anzi (2001), Bani Hamdan (2002) on determination of the intellectual capital elements (attract intellectual capital, the creation of intellectual capital, stimulate intellectual capital, maintaining intellectual capital, and customer consideration)

In the current research it will depend on the basic elements of intellectual capital represented by (recruitment, creation, activation, the maintenance, and customer consideration)

From the previous analysis and opinion from mentioned researchers, indicates that there is an agreement about determination of elements of intellectual capital, several terms to explain elements of intellectual capital or intangible assets can be used, but most authors have mentioned three categories of intellectual capital: (human capital, structural capital and customer/relation capital).

"Human capital relates to the skills, attitudes and efficiency of employees. However, Organization cannot own this type of capital unlike structural capital and is considered as rented capital. Relational capital, on the other hand, maintains the organizational relationship with all its stakeholders. Organizational or structural capital provides supportive infrastructure to employees to work in the organization. Researchers also have argued that organizational culture; process and innovation are part of structural capital" (Marr et al., 2003).

#### **2.1.4.1. Human Capital**

It is hard to define human capital accurately due to it relies on the nature and quality of the job and enterprise also the several situational factors which relevant to the job Appuhami (2007). Smith's economic theories, is the roots and base of human capital, where Smith reported the contribution of human asset is substantial to the performance of organization and be side that it's important to the growth of economic of the country as whole. Numbers of studies (Appuhami, 2007; Aston, 2005; Bontis, 1999; Bozbura, 2004) sees human capital or human asset as the stock of knowledge, skills and ability embodied in the capacity to perform jobs aiming to produce economic value. Therefore, human capital experts described it as the skills and knowledge achieved by a people through previous education and experience (Sullivan and Sheffrin, 2003). Similarly Aston (2005) enhances the opinion pointing out by others that human capital represents the personnel attributes/manner including Acquaintance, proficiencies and knowledgeable. Bozbura (2004) has proposed that human capital "can be acknowledged as an accumulating of general knowledge obtained by employees through their work tenure, leadership skills, the competence to take risking whilst performing the job and making decisions, and the competence to solution ticklers".

Human capital consist the knowledge, proficiencies and efficacy that workers take with them when they tend to leave an organization. It represents knowledge, skills, ability and experience of employees. Roos et al. (1997) "argue that employees generate Intellectual Capital through their ability, their attitude and their intellectual agility. Ability includes skills and education, while attitude covers the behavioral ability of the employees' work. Intellectual agility cans one to change exercising and to think of creativity solves to ticklers.

Components of human capital are mentioned below;

- Knowledge.
- Competence.
- Skills and experiences of employees.
- Creativity capacity, innovation.
- Know-how and last experience.
- Teamwork competence.
- Employee flexibilities.
- Motivation & satisfy.

- Educating Competence etc". (Roos,2007)

#### **2.1.4.2. Structural Capital**

Based on the organizational concept structural capital typifies all most non-human resources of skills and knowledge. It includes of enabling structures which allow the organization to properly utilize Intellectual Capital (Muhammad et al, 2006). It is reported by (Seetharaman et al 2004; Muhammad et al, 2006) that "These structures Range from tangible part of intangible items offered by an organization, such as patents, Copyrights, trademarks, databases, software systems and processes to intangibles such as corporate culture, accountability, efficiency, and trust between employees". Ashton (2005) explained structural capital "as included of different kinds of interior value bikers of a corporation including processes, routines, databases, customer files, work literature or manuals, and organization structures". Pursuing (Sveiby (1997), Guthrie and Petty, 2000; Lee and Guthrie, 2010) "assert on structural capital consists of internal capital, which includes intellectual property, administration philosophy, company culture, administration processes, information, networking systems and financial relations. Conventionally, mentioned by (Carson et al, 2004) that structural capital "includes the processes and procedures formed by employee's intellectual input". Moon and Kym (2006) have conceptualized "structural capital in terms of organizational culture, processes, information systems and intellectual proprietary".

According to Ashton(2005) Due to structural capital created by outputs, system or products which created by the enterprise over time, so that they cannot include within an employee or individual. Therefore dissimilar human capital, structural capital exists within the company after employees quit working in the organization (Muhammad et al, 2006; Appuhami, 2007; Muhammad and Aida, 2007). Hence, (Bontis et al, 2006; Appuhami, 2007; Edvinsson 1997) propose that the organization administration "must attempt to transmutation the corporations human capital knowledge into structural capital components to guarantee value creating in the long run".

So that the Elements of structural capital can be illustrated as below:

- \_ "Organizational processes,
- Databases,
- Manuals,

- Trademarks,
- Leadership,
- Leaseholds,
- Franchises,
- Patents, etc ". (Ashton,2005)

#### **2.1.4.3. Relation Capital**

Relation capital refers to all resources which are related to the external relationships of the organization such as customers, suppliers, or so on. Therefore, "relational capital is the knowledge that is included in the relationships with any stakeholder that impact the corporations lives". Capello and Faggian (2005) believe that relational capital is "a collection of various type of relationships like market relationships, power relationships and collaboration". Similarly to others Chen et al (2006) "assert that relational capital inclusion strong echelons of understanding, trust, relationship and cooperation between strategic alliance partners, and consequently encompasses stocks of conductivities, Interactions, Ties, Proximity , goodwill and homages among a company and its upstream suppliers, downstream clients, strategic partners or external stakeholders". Guthrie and Petty (2000) define relational capital as "external capital, which includes brands, clientele and buyer satisfaction, firm names, circulating aqueduct, business cooperating or cheapening accords".

Elements of relation capital are mentioned below:

- Buyer relationship.
- Buyer devotion and satisfaction.
- Circulating relationships and accords.
- Relationships with other partners and other stakeholders , etc".

(Capello R. and Faggian, 2005)

#### **2.1.5. Characteristics of Intellectual Capital**

Many research and scientific authors determined characteristics of intellectual capital from different perspectives they highlighted some of the characteristics as below:

1. Regulatory/ organizational property: With regard to the strategic level, intellectual capital is spread in all levels and in varying proportions, But Regarding the organizational structure that fits the intellectual capital certainly is the



organizational structure where can be partly flexible, while the official is used is very low and tends to decentralize the administration clearly.

2. Professional property: here focus is on organizational education and supervising training, and for employees are not necessarily require having academic certificate, Professional property is characterized by high intellectual capital, diverse skills and long experiences.

3. Behavioral and personal property: dealing with intellectual capital tend to be highly risky, due to, it deals with the topics that needed ensuring. In addition intellectual capitals inclined of making initiative and provide ideas and constructive proposals, it refers to the ability to make decisions without hesitation and has included high levels of intelligent and perseverance is serious work and high self-confidence.

4. creativity/ innovative property: administrative and management engages in various concepts especially those which relating to innovation and creativity, (Daft) represents the creativity as idea or adopting a new behavior in a simple way, Here, creativity is the individual activity which by produced something new, whether new product or a new act/behavior.

Other authors(Itami) argue that intellectual capital is characterized by two main special characteristics:

1. intangible and invisible.
2. Difficult to establish standards for its measurement.

In line with others researcher indicates the regulatory, professional, behavioral and personal and creativity properties, represent substantial properties focused on the fact and the nature of intellectual capital, while it is considered intangible and difficult to measure, intellectual capital is in general considered as unlike to traditional physical capital.

#### **2.1.6. Management of Intellectual Capital**

The new discussion about intellectual capital illustrates it as set in the context of a changing the way and model of organization structures and management. It is obvious for today's business that organizations are quickly transition from leading, leadership and controls to coaching staff, employees empower and certain delegation. By that, all organizational members have a chance to shape their way and

style of working. Therefore it is the management role to harness, maximize and ensure that possibility.

There is no doubt that directors who seek to grow and maximize their corporation intellectual capital should have ability to encourage innovation, widen intelligence and practicing integrity. In fact, intellectual capital has three core efficiencies.

The huge challenging for directors is that how to development intellectual capital three core efficiencies throughout corporation wide. "That's where dialog comes in. Knowledge is established and transposes thru dialog", and directors have to master the art and way of fostering a dialog between all organizational staff. Have a hand to Facilitate, train and leading groups on base of knowledge creation and innovation. Organize group focused workshops and training courses to apply creativity and established skills to certain business challenges considering proceeds procreating, quality, and so on. Managers should coach some specific project teams and supervising needed member's guarantors on how to create a better environment for creativity. Multiple-way dialog can help teams addressing the top problems that facing through the creativity process. (Ross, G., Pike, S., &Frenstrom, L.2005).

" Appraising the culture for Cleverness and creativity .Behaved a "culture audit" to test for the values, mind-sets, behavior and result of the creativity educating organization. Reengineer specified portions of the culture. development creativity approaches to technology networking, organizational structure, performance appraisals, rewards, etc... "In order motivate greater top-integrity relationships, intelligence and creativity. Organization can enhance their intellectual capital, if organizational leaders effectively manage knowledge.

### **2.1.7. Roles of Intellectual Capital**

All organizations are looking for the collection of value-added by intellectual capital, therefore they must think that the intellectual capital's role is only collecting revenue, but that there are areas and other roles should organizations pay attention to it aiming to create value-added, These roles identified by (Harrison & Silvan) as follow:

First defensive roles

These include: the product protection and services generated and created by intellectual capital of the organization, the protection of freedom of design and creativity, decrease conflicts and avoiding complaints and litigation.

Second offensive / attack roles. These include:

-Generate revenue, by Products and services which have been achieved by creations of intellectual capital, intellectual property of the organization, the intellectual assets of the organization, the protection of freedom of design and creativity, decrease conflicts and avoidance of complaints and litigation.

- Devising standards for new markets and new products and services.
- Create penetrate outlets for takeover competitors technology.
- Determination of mechanisms to implement in new markets.
- Formulate a strategy that hampers the entry of new competitors.

And intellectual capital can move from offensive roles to defensive roles and vice versa, and this move should be calculated in advance not a random move.

### **2.1.8. Development of Intellectual Capital**

Brown has emphasized the importance of intellectual capital investment by stating that " the uninvest intellectual capital is the process can be described as a gold has not extracted." This description for this class makes it easier to emphasize the Advantage that can be derived by any organization or Society thru attention of intellectual capital because it leads to (Hejan, 2007, p. 4):

- Increasing creative ability.
- Attract customers and strengthen their loyalty.
- Enhance time competition by offering more new products and progress improving, reducing the period between current innovation and the next ones.
- Reducing costs and the possibility to sell products at competitive prices.
- Improving productivity.
- Enhance competitiveness ability.
- That intellectual capital is the most valuable asset in the twentieth century, because it represents scientific forces that able to enter the core modifications of everything in the work of organizations, due to innovations prosecution.
- Recruit measured systems that have become one of the most important indicators that reflect the development of management thought; it is also one of the most important accounting and management practices.

- The need to give human development efforts and training guaranteed strategically meet the needs of the energies of creativity and the development of organizational learning at the side, the value of knowledge capital of the society and its institutions on the other side.

In deferent words, the importance of investing in intellectual assets can be shown through the following (Yahdih, 2004, p. 14):

- Development creative competency, improve productivity and increase profitability.

- Improve relations with customers and suppliers and providing distinctive products and services.

The most important aspects that should company conceder for the development of human capital are (Yousif, 2005, p7):

1. Attract/Recruit the better human giftedness: the corporation should have a potently system for the choosing process, testing and utilize of new employee and provides the clement for education and sharing of expertise among successive generating of employees.

2. Enriching human capital: This is deed by emboldening workers and motivates them to join training programs and knowledge sharing, attain knowledge and then distributing within the corporation.

3. Maintaining the outstanding employees: This is deed by introducing systems and paths based on administration trusts and encouragement innovation and new ideas.

4. Create an educating environment: modern companies characterized by the intellectual capital and workers knowledge who might leave the company at one day attracting by other rival companies, therefore organizations must have a policy, rules and philosophy which by they can strengthen and consolidate the Organizational loyalty.

Investment in the intellectual capital and the development of intellectual assets leads to achieve some long-term benefits including (Hassan, 2005, p. 368):

- Increase the creative capabilities.
- Improve relations with customers and suppliers.
- Increase services and products.
- Improve productivity and increase revenue.
- Improve employee's attitude and employee's sightedness.

## **2.2. COMPETITIVE ADVANTAGE**

Organizations business competition has become a reality forcing by the many dynamic changes in the environments on both internal and external sides globally and locally. Hence, organizations begin aware of the competition and its importance, as well as the emergence of many new competitors. Therefore, it encourages organization to look for multiple strategies and policies which it can achieve a competitive advantage and give it continue growingly. Here, organizations in various forms seek to achieve a competitive advantage by focusing on the quality of its services and the patterns are submitted and satisfy the needs of its customers, moreover, they search for best practices that can be applied.

This chapter aims to address the concept of competitive advantage and its definitions, sources and dimensions; in addition, this chapter aims to try to clarify the relationship between intellectual capital and competitive advantage. the chapter is divided into eight sections, discusses the following topics: the concept of competitive advantage, the definition of competitive advantage, sources of competitive advantage, the elements of competitive advantage, the importance of competitive advantage, the dimensions of competitive advantage, the factors affecting the creation of competitive advantage, and finally the relationship between intellectual capital and competitive advantage.

### **2.2.1. Concept of the Competitive Advantage**

It is hard to determine the history of the emergence of competition accurately, it has been appeared since business organizations have been founded and so far, the forms of competition have varying ways and forms across different time .In the line of administrative literature note that the first writings about the competition represents the starting point for the concept of competitive advantage.

It stated by ALderson in (1937) responding to main competitive adaptation through the allocation suppliers to meet changes in customer demand, at the same time he pointed that the organizations should seek to achieve the unique characteristics that enable them to differentiate themself through its customers look.

Hoffman (2000, p2) argue that competitive advantage as a technique has been seen since existence of organizations. But as a used term dating back to Chambrlin in (1939) and followed by Selznick (1959), who linked the competitive advantage with

the organizational ability, then followed by Hover and Schendel (1978), who described the competitive advantage as (the unique position being developed by the organization against its competitors through their tactics, skills and the optimal use of its resources compared to competitors. According to this, the authors at this era assumed that competitive advantage is created through the capacity. Also they believed that competitive advantage as components of organization strategy (Reed and Defilipi, 1990, p 90).

When the eighties came it started the second generation of the concept of competitive advantage, at this time some new ideas about competitive advantage has emerged at this stage Day (1984), Porter (1985), stated that the main competitive advantage is the strategic goal, not something that is associated within the strategy ,The justification for this is that superior performance is linked to competitive advantage and organizational achievement has resulted in higher performance automatically (Reed and Defilipi, 1990,p90). Harvey (1986, p 55) agreed with this idea, and he pointed out the competitive advantage represents a source which promotes the development of the organization in the market in order to achieve its earnings through the edge over its competitors in product, price, cost and focus in the areas of production, and when organizations attained competitive advantage, it certainly reflected on the results.

Hicks (1993, p103) stated that the concept of competitive advantage resulting from the information system as a consequence of the use of information technology in forms of superior for the purpose of overtake on competitors. In the same direction Thompson (1997, p22) saw that competitive advantage is nothing but adding real value to customers, this requires the organization to resources development to achieve high returns among those resources information that has developed through the development of the information system.

Before making definitions of competitive advantage, Should know there is no agreement on accurate definition of it, all that because of environment and sector differentiation of the study. Can define it as (organization's ability in implementing production process cannot be applied by other competitors, in way that competitors not be able to achieve those resources to copy these procedures).

Through previous presented for concepts of competitive advantage, can be clear for researcher that competitive advantage can be defined as (representing the organization's ability to create added value compared with other organizations, that

organizational unique obtain thru the elements of cost, excellence, creativity, core competences, and repute. Consequently can perform its work to the satisfaction of existing and possibility customers thru the utilize of information system has superior characteristics which built in accordance with criteria and requirements of high success.

### **2.2.2. Definition of the Competitive Advantage**

Before we give the definitions of competitive advantage we mention that there is no fixed and agreed definition this is different depending on the environment and thoughtful sector.

(M. Porter definition 1993)

Arise competitive advantage once the organization discovers "new ways to be more effective than those used by competitors, where it is able to embody this discovery in the field, in other words, once you make a creative process in its broadest sense".

(Barnegard Fuerst Definition 1995)

Competitive advantage can be defined as "the ability of the organization in the application of production processes is applied to the competition organizations, and when you cannot these organizations to obtain the necessary processes to mimic those resources."

(Nabil Khalil Mursi definition 1998)

Competitive advantage as "a feature or element of excellence of the organization which are achieved by applied a certain strategy to compete".

(Ali Selmi Definition 2001)

Competitiveness is "the skill, technical or outstanding resource that allows the organization making production values and benefits to customers more than what is provided by their competitors, and it confirms apart and different from those of competitors from the customer view who accept this difference and excellence, which will bring them more benefits and values that are superior to the other competitors offer".

(Barney 2002).

Defined the Competitiveness as a "corporate is its capacity to achieve its targets. These objectives are likely to be expressed in a diversity of terms depending on the context".

(Kotler 2004)

sees competitive advantage as "Competence of the organisation to the competitive performance of the corporate in which it is difficult for contenders to tradition him, and can achieve a competitive advantage by implementation the occupations of the work to creation value in the areas of reducing costs compared to its competitors, or to work on their performance in ways that lead to characterizing".

(Zughaibi 2005)

Define it as "a property or group of properties relatively unique to the organization and can keep them for a relatively long period as a result of the difficulty to emulate, that achieve benefit during that period and enable them to outperform competitors in providing services or goods to customers.

(Heizer & Render 2008)

He defined it as the ability to create a system that has a unique feature compare to all competitors.

Through these definitions it is clear that access to competitive advantage requires the organization to be able to effectively satisfaction the needs of clientele better than contenders, and this is linked primarily the actual added value proposed by the organization, on the basis of the above competitive advantage can be procedural defined as the competitiveness that preference the organization and gives precedence to the customer through the difference in the value of their advantage compared with competitors.

### **2.2.3. Sources of the Competitive Advantage**

The competitive advantage is determined by variety of sources, and it may be a result of the effects of the environment or the efforts of the organization to reach it. Sources of the Competitive Advantage are as follows: (Rababiha, Fatima Ali 2006).

1 - Internal sources: related tangible and intangible resources of the institution, such as the basic factors of production, energy/power And primary resources, distribution channels, assets ...And so on. Beside that also competitive advantage can be derive from the used and developed management systems, organization Administrative styles, methods of motivation, returns from research and development, innovation, and knowledge.



2 - External sources: They are many and varied, shaped by the external environment variables and changing which leads to create opportunities and advantages that organizations can exploit and get benefit from them, situations such as supply and demand for raw materials, finance, human resources and other eligible.

3 – Organizations can build a competitive advantage through its strategic options for horizontal and vertical integration, diversification and strategic alliances and relationship with others.

4 - Discovering and exploiting marketing opportunities before the competition, which leads to get a competitive advantage, because organizations discovered markets in advance can offer the product or service in the level of discovered opportunity.

#### **2.2.4. Elements of the Competitive Advantage**

Competitive advantage Achievement depends on the availability of many elements and the nature of the interaction and integration with each other and the most prominent elements of the competitive advantage are as following (Rababiha, 2006, p. 8):

##### **1- Natural Resources:**

Despite the importance of the availability of natural resources to achieve a competitive advantage for the country or the organization, but the availability is no longer an essential source for this feature as a result of many global and local changes that have occurred in recent times, Since the non-availability of these resources is no longer a barrier to achieving competitive advantage, as is the case in Japan, while there are other countries possessed these resources cannot achieve a competitive advantage, and therefore, the availability of resources is no longer preside over the priorities of the competitive equation.

##### **2- Capital:**

A capital availability in the country was able to achieve a high competitive advantage, but the new global economy, cross-border and which allows the transfer of capital from one country to another and not be tied up and geopolitical particular through multinational corporations and investment in developing countries has led to a decline in the importance of the availability of capital of the State or of the organization to achieve its competitive advantage.

### **3- Technology:**

Technological Element plays an important role in improving production efficiency and achieves competitive advantage through the creation of operations and absorbs knowledge, as well as the innovation and application of new technology in business performance. But to take advantage of this element is no longer limited to certain countries, where you can a lot of countries access to technology.

### **4- Human Resources:**

Human resources Represents the quality education and highly skilled which is an important strategic dimension in achieving competitive advantage, As it is one of the most important intangible sources that play a vital role in the creation and application of technology. Due to this source cannot be imitated quickly and easily by competitors.

#### **2.2.5. Importance of the Competitive Advantage**

The importance of competitive advantage can be determined as:

1. Competitive Advantage represents positive sign about directed the organization to occupy a strong position in the market by gaining a larger market share than its competitors, and that means the occupation of the organization's customers more loyal compared to competitors which makes customers less affected to offers from competitors on the one hand and to increase the volume of sales and profits on the other hand (Czepil, 1992, p 40).

2. The competitive advantage is an essential factor to the work of organizations in different kinds and production because it is the base on which competitive strategy formulated around and it interact with

Other factors or variables to support the emergence of a competitive advantage and overall competitiveness strategy Organization (Bosseman and phatak, 1989, p 87).

3. Competitive advantage important through it organizations can attain the essential weapon competitively to face the challenges of the market and competition organizations. That enables organizations to develop competitive knowledge and ability to meet the needs of customers in the future by creating techniques and productivity skills in capabilities to enable them to adapt to the opportunities changing rapidly (Wile Hill, 1997.p 625).

4. Importance of the positions of competitive advantage in the study of strategic management, the studies and researches within the strategy concept of the competitive advantage, which encourage some of the authors and writers to say (can defined Strategic management as a competitive advantage) (Lyanch, 2000, p 153).

5. Competitive advantage represents an important criterion to determine the successful organizations from the others, because of successful organizations are characterized by creating new unique models which is difficult to imitate and emulate, because old models have become well-known and widely available, and that competitors are fully aware of it.(Macmillan and Tampot, 2000, p 89).

#### **2.2.6. Dimensions Achieving Competitive Advantage**

Porter illustrated the low-cost and excellence is the two main strategic to creation value and get a competitive advantage in the industry. Based on what illustrated the writer mentioned, that the competitive advantage (with high profit) achieved by organizations that able to achieve high value, and that the way to creation this value is to reduce costs and to find a way to excellence Business that makes products for consumers who willing to pay the extra price, The Competitive Advantage depends on four dimensions as a high efficiency, high quality, high innovation and High Customer Responsiveness , They units Constructive and comprehensive feature that can be adopted by any organization, regardless of the industry or sector in which it operates, and regardless of the products or services offered to customers (see Figure 2. Source: Hill Charles W. L & Jones. Fareth (2001) strategic management theory 5<sup>th</sup> ed, Houghton Mifflin Company, Boston, New York, p. 127)

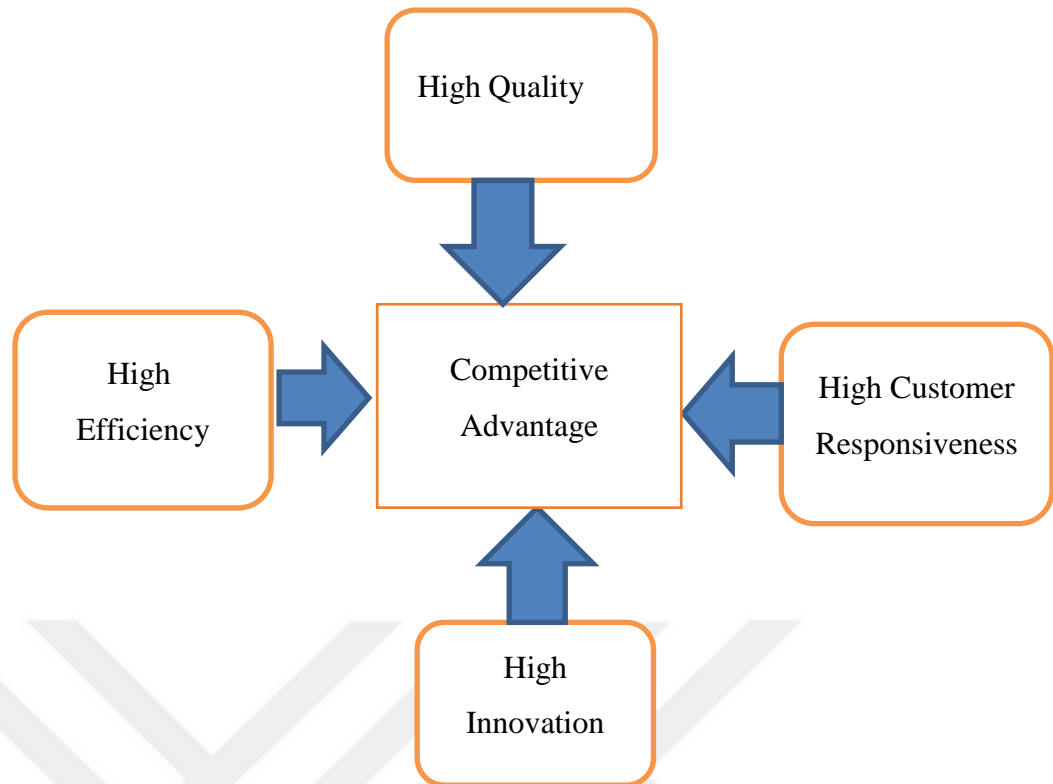


Figure 2. Units of competitive advantage

The following is a brief explanation of the mentioned dimensions:

### 1 - High efficiency:

Efficiency described as the ratio of outputs to inputs required for the completion Robbins (2005, p 571). By the process can convert the input to output, and that the inputs are the main factors of production such as land, human effort, capital, management and knowing to adapt with technological changes. Output are goods and services produced by The company, the simplest measure of efficiency is the amount of inputs required to produce a given output, The most important case For efficiency, appears such matter for majority organizations is the labor productivity factor which is usually measured by the number of units produced per worker, if Assuming all other variables are constant, the industrial organization in which labor productivity is high can make products with lowest cost and therefore they will attain a competitive advantage based on the lower cost.

### 2 - High Quality:

The high quality products are reliable goods or services, in the sense that it leads the work they are perfectly designed. For high quality products effect on the competitive advantage in two aspects: first, offering a high quality product increases the product value of the viewpoint of consumers, and in return the company can sell

their goods with high price, and the customer as a result of the above, make a decision to buy Product. (Krajewski, Ritzman, p96)

The second effect of the high quality on competitive advantage comes from the high efficiency of the company as well as the low cost of production. Whenever less time wasted in making particular products or in providing a secondary service, and the less time to fix mistakes means that turning an increase in worker productivity and reduce the cost per unit. Therefore, the high qualities of the production not only allow the organization Carry high prices of its products, but also allow them to reduce the cost. That is no longer the way to achieve Competitive advantage but has become a way of survival. (Porter 1985).

### **3- High Innovation:**

Innovation is known as something new or unfamiliar in the ways of operating the company or in production that offer. Innovation includes Progress in the types of products, production processes, management systems, organizational structure and strategies conducted by the company.

The innovation could be the most important mark of unity of building competitive advantage for the long term; competition can be seen as a process driven by innovation. Despite the lack of success of each innovation, the successful ones can be the most important source of competitive advantage because it gives the organization something unique - something that competitors cannot have. (J. B. Barney, 1991:pp.99-120)

### **4 - High Customer Responsiveness:**

For the purpose of achieving a high response to the customer, the organization must be able to implement its business better than its competitors that effectively meet the needs of its customers. Therefore, if the organization do so the consumer will be staying in buying their products and be more aware of products value, thus can strengthen the competitive advantage of the organization. Achieving high quality and innovation can be part of the company high response to customer needs. The other important factor in the response for customer needs making goods and providing services, on customer request, whether an individual or a group(Porter

### **2.2.7. Factors Affecting the Creation of Competitive Advantage**

Arise competitive advantage as a result of internal factors or external factors; as follows Bllonas and Qazaefha (2009, p.7):

#### 1 - Internal Factors:

Is the organizations competence to own source and build and have enough human capacities that cannot be available to other contenders, including creativity and innovation, which play a vital role in creating a competitive advantage. Innovation is not limited to the product or service development, but it consists strategy innovation, innovation working methods or utilized technology, or creativity in creating new benefit.

#### 2 - External Factors:

Is represents the change of customer's needs, technological changes, economic or legal changes, and that could creation a competitive advantage for some Establishment as a outcome of the quick backlash to the changes, for example, one can say the organizations that imported modern technology Needed in the market faster than others, then they able to creation a competitive advantage thru the speed of its backlash to the changing technology and the market needs. From here it shows the important of the organizations competence in quick respond to external variables, and this depends on the flexibilities of the organization and its competence to pursue variables thru information analysis and forecasting changes, and owning an affective information system.

### **2.2.8. The Relationship between Intellectual Capital and Competitive Advantage**

Through knowledge organizations can continue in the possession of competitive advantage, because it is an essential source of Advantage. Organizations should know how to possess and how it runs, because the result is intellectual capital ,and then realize how owning, managing, measuring, the relationship between intellectual capital and competitive advantage is similar to system Input which is the intellectual capital components, and the process is applying the principle of (value, rarity, difficulty to imitate, Optimal exploitation) on the intellectual capital components, The system output is represented in the organization possession of the strategic knowledge capital, incorporates components of the distinct human capital, distinct structural capital, And the customers relation capital. When the organization

possesses these components able to achieve the competitive advantage that represents the superior quality, superior innovation, superior efficiency, superior response, and explain of above are as follows(Mohammed Omar Abdel-Rahman2011

#### 1- Section 1: excellent human capital:

Achieve excellence in the organization's performance is not based on possession of natural resources, financial and technological resources only, But primarily on the availability of qualified human resources that have the ability to maximize the utilization of those resources, in order to Achieve competitive advantage, intellectual resources is the source of thought, innovation and creativity, But taking into account that this will be Competencies strategy characterized by scarce resources, the difficulty to mimic, the ability to create value and non-replaceable by other resources which represents in the framework of the dependable strategy.

The excellence in human capital include setting educating strategy of the organization, which is the cornerstone to increase the expertise, skills and competences as it leads to the completion of the internal processes competently and effectively, thereby to achieve the proposed value for customers, and then reach the financial goals Of added value and raising the return on investing.

#### Section 2: excellent structural capital.

The structural capital outstanding for the Organization expresses the knowledge assets that remain in the organization circuit when human element is not taken into consideration. Organization should take into count all the organization elements in order to achieving competitive advantage And raising the market value, and the organization can possess a distinct structural capital outstanding through the promotion and development of Creative capabilities and participation of individuals and sharing knowledge for the purpose of deepening their productivity in various fields, By intensifying Activities and the development of infrastructure and adapted as required by the internal and external environment of the organization variables, such as the acquisition of the latest information and software systems and databases, additionally, the appropriate organizational structure that encourages individuals regardless of the organizational position aiming to better working and maximum exploit of the knowledge that they possess, And therefore if do so, can determine the structural capital aspects characterized in the operating area of operations, namely: the consolidation of the dimensions of this component To achieve operational

excellence by improving operational processes aimed at achieving the low cost of high quality, moreover reducing internal operations cycle duration and optimum use of the physical and administrative assets, the probability benefits from this resource in quickly improving production without any problems or extravagance in the use of the supplier, And raise the quality level of production and reduce wastage.

### 3- Excellent Relation Capital: (Mohammed Omar Abdel-Rahman2011)

It reflects the strength of the relationship between the organization and its customers and suppliers, it is considered the starting point of any organization Are always markets (customers), which is also the access point on the grounds that maintaining the market or entry New markets, Or gain additional market shares and access to privileged clients, and to meet consumer needs. Organizations seek to achieve all of these objectives, and this will be obtained only through effective market study and market research, And that regardless to the cost, the returns are guaranteed and have positive value for the organization through that they able to achieve the competitive advantage, and Areas of excellence customers capital are:

- Creating excellence through innovation and development, such as the offering new products or penetrate new markets, or attract new customers.
- Increased customer value through customer management processes and enhance the relationship with existing customers.
- Reduce delivery time or quick responding to customer requests.
- trying to announce the organization as a new member of the community through the consolidation of real and effective relationships with Owners and external interests.

From the above it can be said that knowledge is the main source of value creation and sustainable competitive advantage because it gives the organization the excellence of knowledge from competitors, raise revenues, and encourage creativity and innovation, and promote Customers loyalty.

Knowledge management processes and knowledge capital (intellectual) in organizations lead to competitive advantages by enable the organization to set better formulate and implement successful competitive strategies. Knowledge capital considered as a Directed force behind the competition. In addition is the main vector for innovation and excellence in performance. The Organization should adopt the basic mechanisms and approaches to the management of intellectual capital, in the form help to Access the value of knowledge capital, and for effective impact of that



value in finding competitive advantage ,organization should focus on how to develop and invest of the intellectual capital even be more superior to its competitors, especially in light of the environment Intense competition, and also exploit the its human potential to be more strengthen of the capabilities, skills and competencies, due to it the most expensive and the most valuable asset in the organization.



## **SECTION THREE MATERIAL AND METHOD**

### **3.1. MATERIAL**

In order to obtain information necessary for the completion of the current study and access to the results and the achievement of the goals of data has been adopted in both theoretical and practical on the following methods:

In order to cover the theoretical aspect of the study was to rely on many sources that consisted of references of Arabic books and English as well as studies and research and periodicals, theses, conferences and articles that have been obtained through the World Wide Web (Internet) relevant to the subject of the study.

About the Practical side the researcher depended on the following ways to obtain the required data in order to finish this side of the study as following:

Personal Interviews has through field visits conducted by a researcher at the universities non-governmental in the city of Erbil for the purpose of closely at the necessary preliminary data. This research relied on the questionnaire as the main instrument for collecting related data for the study variables.

The population of this study is composed of (Dean, Assistant Dean, head of the department in the nongovernmental University City of Erbil / Iraq) and the sample consists 90 of them. Based on the feedback of pilot study, some minor modifications have been made to the questionnaire and the final form of the questionnaire was used to collect data from 90 persons. It has been received (85) the percentage of the received questionnaires was (% 94) Gathered data are analyzed using the statistical package program SPSS 22.0)

Questionnaire has been prepared as follows:

1. Prepare a preliminary questionnaire for data and information collection.
2. Before distribution Questionnaire have been seen by supervisor in order to test their suitability for data collection.
3. The Questionnaire was presented to a group of field expert, aiming to provide advice, guidance, modify and remove non-necessary questions.
4. Conduct pretest of the questionnaire in the study population to identify and adjusted as appropriate.
5. Distribute the questionnaire to all respondents to collect the necessary data for the study during the period from 04.12.2016 to 17.1.2107.

Based on studies Ahmed (2012) and Ababaker (2011) a questionnaire is prepared and applied in order to determine the impact of human intellectual capital on achieving competitive advantage. The survey form is available in the annexes part (ANNEX 1). The first section is (6) questions related to respondents' demographic information (gender, age, education level, Number of Training Courses, The Total Number of Years of Service and Number of years of service in the Current position).

The second part is composed of 35 questions using a five-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree), and it deals with the impact of intellectual capital to achieve the competitive advantage of nongovernmental universities were breaked down into four axis as follows:

- \* Axis I: Questions relating to human capital consists of (5) items.
- \* Axis II: Questions concerning structural capital consists of (5) items.
- \* Axis III: Questions relating to relation capital consists of (5) items.
- \* Axis IV: Questions regarding the level of competitive advantage consists of (20) items.

### **3.2. METHOD**

In order to summarize raw data, several descriptive statistics are calculated such as frequency distributions, arithmetic mean and standard deviation. Moreover, Regression Analysis (ANOVA) is performed with the aim of comparing impact of human intellectual capital on achieving competitive advantage.

## SECTION FOUR FINDINGS AND DISCUSSION

On this section of the study, findings obtained from the analyses will be given and discussed. First of all, descriptive statistics concerning the respondents of the survey will be shown. Secondly, the results of the Regression Analysis test will be given in order to impact of human intellectual capital on achieving competitive advantage.

### 4.1. DESCRIPTIVE STATISTICS

Descriptive statistics about Gender, Age, Education levels, Number of Training Courses, The Total Number of Years of Service, and Number of years of service in the Current position, responded to the survey are as described in the following tables.

Table 1. Distribution of respondents by gender

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Males	67	78.8
Females	18	21.2
Total	85	100.0

Table 1 gives information related to the gender of respondents. Based on that information, 21.2% of respondents are females and 78% of them are males

Table 2. Distribution of respondents by age

<b>Age</b>	<b>Frequency</b>	<b>Percent</b>
<= 30	3	3.5
31 - 40	27	31.8

41 - 50	28	32.9
51 - 60	9	10.6
61 - 70	17	20.0
71+	1	1.2
Total	85	100.0

Table 2 exposes information concerning respondents age. This information points out that 3.5 % of respondents are younger than 30 years old, 31.8% are between 31-40 years old, 32.9 % are between 41-50 years old, 10.6 % are between 51-60 years old and 20.0 % are between 61-70 years old.

Table 3. Distribution of respondents by education level

Education	Frequency	Percent
PhD	54	63.5
Master	29	34.1
Bachelor	2	2.4
Total	85	100.0

Table 3 discloses information about education level of respondents. 63.5 % of respondents are **PhD**, 34.1% **Master**, whereas 2.4% have **Bachelor** degrees.

Table 4. Distribution of respondents by training courses

Training	Frequency	Percent
Not participate	3	3.5
One training	2	2.4
Two training	17	20.0
Three training	63	74.1
Total	85	100.0

Table 4 exposes information concerning respondents by Number of Training Courses This information points out that 3.5 % of respondents are Not Participate on the training, 2.4 % of respondents are see one training , 20 % of respondents are see two training and 74.1 % of respondents are see three training.

Table 5. Distribution of respondents by years of service

<b>Year</b>	<b>Frequency</b>	<b>Percent</b>
<= 10	23	27.1
11 - 20	27	31.8
21 - 30	16	18.8
31 - 40	14	16.5
41 - 50	4	4.7
51+	1	1.2
<b>Total</b>	<b>85</b>	<b>100.0</b>

Table 5 exposes information concerning respondents The Total Number of Years of Service, information points out that 27.1 % of respondents are less 10 years of Service, 31.8 % are between 11-20 years of Service, 18.8 % are between 21-30 years of Service, 16.5 % are between 31-40 years of Service and 4.7 % are between 41-50 years of Service.

Table 6. Distribution of respondents by years of service in current position

<b>Year</b>	<b>Frequency</b>	<b>Percent</b>
<b>1</b>	38	44.7
<b>2</b>	22	25.9
<b>3</b>	12	14.1
<b>4</b>	4	4.7
<b>5</b>	2	2.4
<b>6</b>	1	1.2
<b>7</b>	2	2.4
<b>8</b>	3	3.5
<b>40</b>	1	1.2
<b>Total</b>	<b>85</b>	<b>100.0</b>

Table 6 exposes information concerning respondents number of years of service in the Current position, information points out that 44.7 % of respondents are 1 year of service in the Current position, 25.9% of respondents are 2 years of service in the Current position,14.1% of respondents are 3 years of service in the Current position,4.7% of respondents are 4 years of service in the Current position,2.4% of respondents are 5 years of service in the Current position,1.2% of respondents are 6 years of service in the Current position,2.4% of respondents are 7 years of service in

the Current position, 3.5% of respondents are 8 years of service in the Current position and 1.2% of respondents are 40 years of service in the Current position.

#### 4.2. RELIABILITY SCORES

In order to show the reliability of the scales, Cronbach's alpha scores for each scale is calculated. The results are shown in the following table. As can be seen from the table, scales have enough reliability. The lowest reliability score is for efficiency scale which is 0,649.

Table 7. Reliability of the scales

Scale	Number of Items	Cronbach's alpha
Human Capital	5	0,771
Structural Capital	5	0,815
Relational Capital	5	0,847
Quality	5	0,887
Efficiency	5	0,649
Creativity	5	0,920
Responsiveness	5	0,859

#### 4.3. CORRELATION AND REGRESSION ANALYSES

In the following table, the correlation coefficients between the variables in the study are shown.

Table 8. Correlation coefficients

		Human Capital	Structural Capital	Relational Capital	Quality	Efficiency	Creativity
Human Capital	Pearson Correlation	1	,671**	,682**	,735**	,476**	,607**
	Sig.		,000	,000	,000	,000	,000
	N	85	85	85	85	85	85
Structural Capital	Pearson Correlation	,671**	1	,766**	,760**	,496**	,744**
	Sig.	,000		,000	,000	,000	,000
	N	85	85	85	85	85	85
Relational Capital	Pearson Correlation	,682**	,766**	1	,800**	,423**	,798**

	Sig.	,000	,000		,000	,000	,000
	N	85	85	85	85	85	85
Quality	Pearson Correlation	,735**	,760**	,800**	1	,432**	,789**
	Sig.	,000	,000	,000		,000	,000
	N	85	85	85	85	85	85
Efficiency	Pearson Correlation	,476**	,496**	,423**	,432**	1	,576**
	Sig.	,000	,000	,000	,000		,000
	N	85	85	85	85	85	85
Creativity	Pearson Correlation	,607**	,744**	,798**	,789**	,576**	1
	Sig.	,000	,000	,000	,000	,000	
	N	85	85	85	85	85	85

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

In order to determine the impact of intellectual capital on quality dimension of competitive advantage, a multiple regression analysis was performed. The results of the analysis are shown in the following tables. As can be seen from the tables, the model is significant. Independent variables (Relational\_Capital, Human\_Capital, Structural\_Capital) explain 73,1% of quality dimension. All of the independents variables positively affect quality dimension of competitive advantage

Table 9. Regression summary: Quality

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,855 <sup>a</sup>	,731	,721	,39244

a. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 10. Regression ANOVA results: Quality

#### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33,869	3	11,290	73,304	,000 <sup>b</sup>
	Residual	12,475	81	,154		
	Total	46,344	84			

a. Dependent Variable: Quality

b. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital



Table 11. Regression coefficients: Quality

		<b>Coefficients<sup>a</sup></b>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-,014	,264		-,052	,959
	Human_Capital	,328	,096	,283	3,412	,001
	Structural_Capital	,264	,098	,254	2,684	,009
	Relational_Capital	,425	,099	,413	4,306	,000

a. Dependent Variable: Quality

In order to determine the impact of intellectual capital on efficiency dimension of competitive advantage, a multiple regression analysis was performed. The results of the analysis are shown in the following tables. As can be seen from the tables, the model is significant. Independent variables (Relational\_Capital, Human\_Capital, Structural\_Capital) explain 28,4% of efficiency dimension. The independents variables, except relational capital, positively affect quality dimension of competitive advantage

Table 12. Regression summary: Efficiency

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,533 <sup>a</sup>	,284	,257	,46229

a. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 13. Regression ANOVA results: Efficiency

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,863	3	2,288	10,705	,000 <sup>b</sup>
	Residual	17,311	81	,214		
	Total	24,174	84			

a. Dependent Variable: Efficiency

b. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 14. Regression coefficients: Efficiency

		<b>Coefficients<sup>a</sup></b>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,955	,311		6,293	,000
	Human_Capital	,219	,113	,262	1,933	,057
	Structural_Capital	,243	,116	,323	2,099	,039
	Relational_Capital	-,003	,116	-,003	-,022	,982

a. Dependent Variable: Efficiency

In order to determine the impact of intellectual capital on creativity dimension of competitive advantage, a multiple regression analysis was performed. The results of the analysis are shown in the following tables. As can be seen from the tables, the model is significant. Independent variables (Relational\_Capital, Human\_Capital, Structural\_Capital) explain 68,0% of creativity dimension. The independents variables, except human capital, positively affect quality dimension of competitive advantage

Table 15. Regression summary: Creativity

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,825 <sup>a</sup>	,680	,669	,46643

a. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 16. Regression ANOVA results: Creativity

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37,514	3	12,505	57,476	,000 <sup>b</sup>
	Residual	17,622	81	,218		
	Total	55,136	84			

a. Dependent Variable: Creativity

b. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 17. Regression coefficients: Creativity

		<b>Coefficients<sup>a</sup></b>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	,051	,314		,162	,871
	Human_Capital	,040	,114	,032	,351	,726
	Structural_Capital	,351	,117	,310	3,009	,003
	Relational_Capital	,605	,117	,539	5,166	,000

a. Dependent Variable: Creativity

In order to determine the impact of intellectual capital on responsiveness dimension of competitive advantage, a multiple regression analysis was performed. The results of the analysis are shown in the following tables. As can be seen from the tables, the model is significant. Independent variables (Relational\_Capital, Human\_Capital, Structural\_Capital) explain 61,5% of responsiveness dimension. The independents variables, except structural capital, positively affect quality dimension of competitive advantage

Table 18. Regression summary: Responsiveness

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,784 <sup>a</sup>	,615	,601	,44172

a. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 19. Regression ANOVA results: Responsiveness

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25,271	3	8,424	43,174	,000 <sup>b</sup>
	Residual	15,804	81	,195		
	Total	41,076	84			

a. Dependent Variable: Responsiveness

b. Predictors: (Constant), Relational\_Capital, Human\_Capital, Structural\_Capital

Table 20. Regression coefficients: Responsiveness

		<b>Coefficients<sup>a</sup></b>				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,460	,297		1,549	,125
	Human_Capital	,293	,108	,269	2,708	,008
	Structural_Capital	,205	,111	,209	1,850	,068
	Relational_Capital	,381	,111	,393	3,428	,001

a. Dependent Variable: Responsiveness

## **SECTION FIVE CONCLUSION AND SUGGESTIONS**

In this study, we investigated the effects of components of intellectual capital, namely human capital, structural capital and relational capital on the different dimensions of competitive advantage, namely quality, efficiency, creativity, and responsiveness. We tested the hypotheses developed using data collected from nongovernmental universities in Erbil, Iraq. In summary, we showed that intellectual capital positively affects competitive advantage. In other words,

- There is a positive relationship between intellectual capital and competitive advantage in nongovernmental universities.
- There is a positive relationship between human capital and competitive advantage in nongovernmental universities.
- There is a positive relationship between structural capital and competitive advantage in nongovernmental universities.
- There is a positive relationship between relational capital and competitive advantage in nongovernmental universities.

Based on these findings and literature review, we conclude that

- Intellectual capital is the essential backbone for achieving the success of organizations.

- Real capital that it possesses by organizations is not only physical capital but is intellectual capital, which is basically in the knowledge that can be converted into an added value through the successful investment in human capacities and competencies.

- The difference between the nominal value and book value of the organization is represented by its intellectual capital, and is a source of competitive superiority and competitive advantage for it.

- Human capital includes skills and competencies available in an individual that strongly contributes to the competitive advantage of the organization.

- Relation Capital contributes to achieving competitive advantage for the organization.
- Structural Capital contributes to the achievement of competitive advantage for the organization.
- Quality contributes to the achievement of competitive advantage for the organization.
- Creativity contributes to the achievement of competitive advantage for the organization.

### **5.1. RECOMMENDATIONS OF THE STUDY**

Based on the overall results that have been reached, the researcher proposes some recommendations that can contribute to the development of intellectual capital in nongovernmental universities in determined population in form that leads to their competitive advantage and sustainable development as follows:

- Essential for nongovernmental universities to recognize the importance of their intellectual capital for the purpose of concern in this resource and its development, therefor exploits it to achieve sustainable competitive advantages.
- Increased attention to the intellectual capital and the way of managing it, which must be managed because it is an important source to achieve excellence.
- The need to deal with the intellectual capital as the most important strategic resource possessed by the university, And maintain it constantly because it is the active element for the success of the university especially in light of the massive technological development that appeared in the business environment.
- The need to build universities based knowledge.
- Give great importance to the components of intellectual capital, including Relation capital by improving relations with Customers, and human capital through training and continuing education, and the structural Capital through the modernization of the organizational structures and competencies.
- The need to focus on the process of building intellectual capital by giving individuals the opportunity to encourage them to express their views and suggestions on the development and improvement of work processes, hence creating a creative environment.
- The need to give great importance to meet the needs of customers and the speed of response.

- The essential for universities to pay attention of elements of Relation capital and trying and strive to achieve their loyalty, satisfaction, retention and relation development, moreover, making strong relationships with them and improve relations with customers.

- University managers should increase its efforts in supporting the creativity operations, innovation and retention of human resources who have unique cognitive abilities, and so by getting rid of restrictions that constraints limit the ability of individuals to innovate, additionally allowing them thinking creativity at work.

- University should enhance strategic alliances and relationships with other universities, so that can get benefits from their expertise in the field of work

- Encouraging the building of group working and teams based on self-managing, beside that, organizing teams for research and development.

- The need to work on the development of the organizational structure constantly and make it more flexible, that allowing providing a supportive environment for the development of intellectual capital.

## **5.2. SUGGESTIONS FOR FUTURE STUDIES**

The Researcher suggests for future studies can be proposed in the following areas of research:

- proposing an entrance for measuring the intellectual capital in the light of knowledge-based economy.

- The importance of measurement and accounting disclosure of intellectual capital in achieving competitive advantage for universities.

- Obstacles and deficiencies in universities intellectual capital management and its impact on the enhancing of competitive advantage.

- Evaluating the investment strategies in human capital, and its role in achieving outstanding performance of universities.

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## ANNEXES

### ANNEX 1. QUESTIONNAIRE

This questionnaire form is a part of a project thesis " impact of human intellectual capital in achieving competitive advantage" An Empirical Study of the opinions of a sample of the Dean, Assistant Dean, head of the department, in Nongovernmental universities in the city of Erbil.

Your participation in the answer contained questionnaire questions can show the real image of the study with a clear impact on the academic value of the research and its reliability.

Thank you for your valuable time, with our thanks and gratitude

Researcher  
Fakhraldin Bayz Ali

Supervisor  
Assoc.Prof. Dr.Ibrahim Halil Seyrek

#### **FIRST PART**

Note: Please Add the mark (✓) in the appropriate field, and that is consistent with your answer

1. Gender: Male ( ) Female ( )
2. Age: ( ) year
3. Academic achievement: PhD ( ) Master ( ) Higher Diploma ( ) Bachelor ( )
4. Number of training courses:  
A. I did not participate ( ) (b) one training session ( ) (c) Two ( ) (d) three cycles  
Or more ( )
5. The total number of years of service: ( ) years.
6. Number of years of service in the Current position: ( ) years.

## SECOND PART

Intellectual capital: the estimated non-tangible intellectual and held by a group of individuals working in the organization and that contribute to finding appropriate solutions to the problems of the organization and the pursuit of innovation and sustainable competitive advantage for the organization.

Please point extent of your agreement with each paragraph of the paragraphs below:

1: Strongly disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly agree

<b>Human Capital</b>	1	2	3	4	5
The teachers at the university characterized by possessing high levels of knowledge					
The university is keen to maintain teachers with diverse knowledge					
The university Encourage teachers to participate in the development of their knowledge and experience by training courses					
Teachers at the university feel in high spirits in working as team					
Taken into account the suggestions and opinions of teachers in the development of the business					

<b>Structural Capital</b>	1	2	3	4	5
The University aspires to get a patent as a result of a distinct effort					
The University has the latest technology in the practical application of computer and communication devices used in the storage and retrieval of knowledge.					
The University adopts modern flexible information systems to provide timely					
The University uses databases and procedures and programs to achieve business					
The University is practicing the activities and processes that help to					

discover and strengthen the flow of knowledge and organizational capabilities					
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<b>Relation Capital</b>	1	2	3	4	5
The university management has made a comprehensive survey to find out the needs and desires of the customer constantly.					
The University relies on honest and transparent relationship with related parties.					
The University offers an educational performance level and a distinct level of scientific results that satisfies the customers.					
The University strengthens its relationship with other universities with their participation in research in order to sustain the link with them.					
The university is interested in developing relations with universities and other scientific bodies.					

Competitive advantage: is the organization's ability to build or configure an added value compared to other organizations and it represents through the elements of quality, efficiency, creativity, responsiveness, enabling it to carry out its work to the satisfaction of current and potential customer through the use of information system has properties superior and built according to the principles and requirements of high success.

<b>Quality</b>	1	2	3	4	5
The University attracts qualified and trained members in order to contribute to the provision of high quality services					
The university is interested in designing their training programs to achieve the best possible level of quality for their products.					
The University provides high quality services leads to an increase in the number of customers and the face of competitors.					

The University is Characterized by the high quality of services compared to other universities.					
There's belief by senior management to focus on quality as a strategic requirement.					

<b>Efficiency</b>	1	2	3	4	5
The optimal use of the energies of the teachers at the university makes it able to offer its services at a lower cost than other college cost.					
The costs of Preparation and qualification of teachers in the university are less if compared to competitor university.					
The university Characterized by lower cost of services compared to the other competition university costs					
The Required numbers of competent teachers provide as a result of their training ensures that the university provide services with less costs.					
The university is keen to build a management information system and make it marked a point compared to universities that do not have the information system.					

<b>Creativity</b>	1	2	3	4	5
The University creativity cares to expand the horizons of development and Renewal to achieve competitive advantage					
The University encourages everything new in the field of work by self-learning					
The university is keen on innovation to meet the challenges in their work environment					
The university is achieving a competitive advantage through the innovative use of modern methods in the implementation of training programs, such as brainstorming method.					
The University uses multiple techniques to help them find new ways of working which are different from the rest of the competition universities					

<b>Responsiveness</b>	1	2	3	4	5
There is a Sufficient flexibility at the university to strengthen its competitive position.					
The university teachers can implement more than a task diverse skills					
The university has the ability to Responsiveness rapidly and adapts to provide a variety of services to its customers to meet their needs and desires.					
The university meets the needs and demands of customers on time.					
The university is considering a fast providing of service to customers as contribution to building its reputation.					

## ÖZGEÇMİŞ

Fakhraldin Bayz 1979 yılında Irak’da doğdu. Orta öğrenimini Irak’ta tamamladı. 2002 yılında Salahaddin Üniversitesi İktisadi ve İdari Bilimler Fakültesi İşletme Bölümü’nden mezun oldu. 2015 yılında Gaziantep Üniversitesi’nde İşletme ABD İngilizce Tezli Yüksek Lisans programına başladı.

## VITAE

Fakhraldin Bayz was born in Iraq in 1979. He completed primary education in Iraq. He graduated from the Department of Business Administration Faculty of Economic and Administrative Sciences at Salahaddin University in 2002. He has begun the Master of Business Administration in English at Gaziantep University in 2015.