

The role of the Intellectual Capital in achieving the Competitive Advantage: Case study of architectural studies' firm "EL Bina"

دور رأس المال الفكري في تحقيق الميزة التنافسية: دراسة حالة مكتب الدراسات الهندسية "البناء"

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Abstract

This research aim to show the importance of the intellectual capital in the creation of competitive advantage for the organisation .So, it aimed to show this effect empirically by studying it in the construction and architectural studies firm "EL Bina". In this study a descriptive analytical method was used to reach its objectives after consulting several theoretical references. Then a questionnaire was elaborated that includes (20) statements covering the variables of the research, which was distributed on all the employees of the Firm. To analyse the responses SPSS tool was used. We've found that the company's lack of keenness to provide satisfactory incentives for her employees has a negative impact on her achieving a competitive advantage by $\beta = -0.734$. For that we recommend that the firm focus more on giving not only material incentives but also encourages her employees and provides psychological, temporal, professional and other kinds of incentives.

JEL Classification Codes : M12 ; M11

Keywords

Intellectual Capital ; Competitive Advantage; "El Bina" Firm for construction and architectural studies

الكلمات المفتاحية

رأس المال الفكري،
الميزة التنافسية،
مكتب البناء و
الدراسات الهندسية
« El Bina »

الملخص

تهدف الورقة البحثية الى ابراز الدور الذي يلعبه رأس المال الفكري في خلق الميزة التنافسية للمنظمة. ولتحقيق الهدف ركزنا في دراستنا على مكتب البناء والدراسات المعمارية « EL Bina ». حيث استخدمنا المنهج الوصفي التحليلي المناسب لطبيعة الدراسة وموضوعها، ولجمع المعلومات الميدانية اعتمدنا على الاستبانة : مكونة من 20 عبارة تغطي متغيرات الدراسة و تم توزيعها على جميع موظفي الشركة خلال شهر جويلية من عام 2020. توصلت الدراسة الى مجموعة من النتائج أهمها: أن عدم حرص الشركة على تقديم التحفيز المرضية للموظفين له أثر سلبي على تحقيق الميزة التنافسية بها بمعامل $\beta = -0,734$. من خلال النتائج قدمنا مجموعة من التوصيات منها: أن تتجه الشركة أكثر نحو تشجيع موظفيها و اعتماد التحفيز بمختلف أنواعها (النفسية، و الزمنية، و المهنية و غيرها) و ليس فقط المادية منها.

تصنيف JEL: M12 ؛ M11

INTRODUCTION:

Pursuing knowledge nowadays has become a principal need for humans. There is a transcendent seek for knowledge resources whether it was simple knowledge like news or broadcasts, or exclusive knowledge like inventions and super quality production, which is the main goal of organizations and countries.

Human capital remains the main source of knowledge considering the intellectual capital that it contains. This kind of capital and the knowledge that comes with in a sort of academic, technical and management matters could be a competitive advantage by itself, and this is what makes an organization more successful than the others.

Problem statement

In this research paper we aim to show the importance of the intellectual capital and his role in achieving competitive advantage in the construction and studies' firms. And that's by answering the following question:

What role does intellectual capital play in achieving competitive advantage in the construction and studies firm "EL Bina"?

Objectives of the study

This research aim to show the importance of the intellectual capital in the creation of competitive advantage for the organisation .So, we aimed to show this effect empirically by studying it in the construction and studies firm "EL Bina". Furthermore, we try to give reality-based recommendations and open new research horizons.

Importance of the study

The importance of the study came from the importance of its variables in the current business environment:

- The intellectual capital is the principal source of knowledge which is essential for an organization to achieve success, since it can facilitate decision-making and stimulate innovation.
- By having a competitive advantage, an organization can achieve superior performance relative to other competitors in the same industry or superior performance relative to the industry average.

Research hypothesis

On the basis the above discussion and problem statement we've elaborated the following hypothesis:

The intellectual capital has a significant positive effect on competitive advantage in the construction and studies firm “EL Bina”.

This was divided into the following hypotheses:

H1: There is a statistically significant effect of attracting the intellectual capital on the competitive advantage in the studies and construction firm under study.

H2: There is a statistically significant effect of building the intellectual capital on the competitive advantage in the studies and construction firm under study.

H3: There is a statistically significant effect of activating the intellectual capital on the competitive advantage in the studies and construction firm under study.

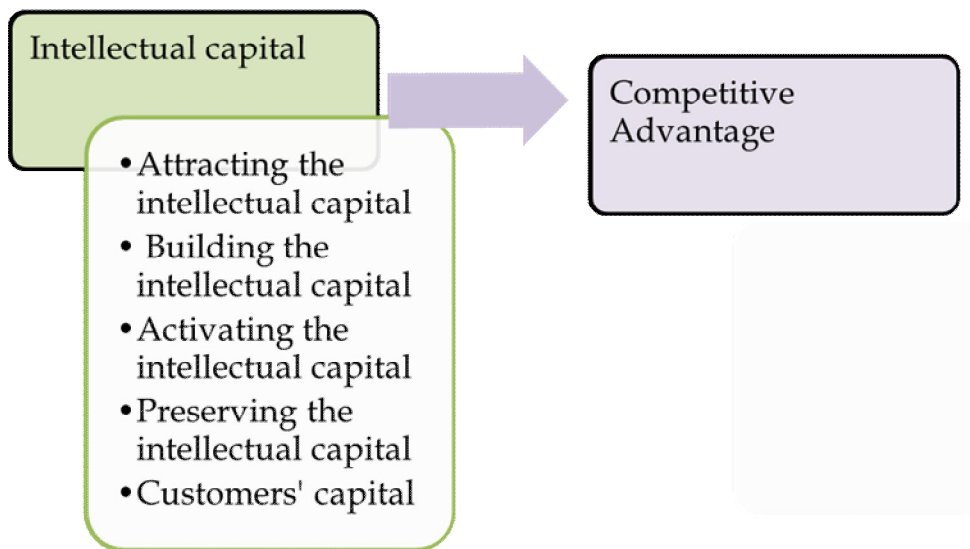
H4: There is a statistically significant effect of preserving the intellectual capital on the competitive advantage in the studies and construction firm under study.

H5: There is a statistically significant effect of customers’ capital on the competitive advantage in the studies and construction firm under study.

Research model:

A research model was built according to the previous assumptions:

Figure 01: The research model: The effect of intellectual capital on the competitive advantage



Source: prepared by the researchers

II. THEORETICAL FRAMEWORK AND PREVIOUS STUDIES:

1. Intellectual capital

The intellectual capital has historical roots from the beginning of humanity. Since **God** created Adam peace be upon him, he delivered in him knowledge and wisdom, **Alah** says: "and He taught Adam the names- all of them" (Baqara/31) . Our religion gives a really great importance to knowledge and to those who have it by calling them "those of understanding/أولي الألباب" in several verses in the Quran and several places in the Sunnah.

But the concept of intellectual capital took place in recent researches only in latest decades, **Itami** noticed in 1980 that there is an instability in the performance of Japanese organizations, by studying it he found out the reason behind. It was the intangible belongings of the corporations which made a huge difference between those who knows how to deal with them and those who didn't (**Rabiaoui & Abbas 2015**).

Tomas Stewart (1997) saw the intellectual capital as the useful knowledge of the organization that could be beneficial when properly used. This point of view made the intellectual capital the actual capital of the organization.

Ralph Stayer the CEO of Johnsonville foods company stated that natural resources were no longer the principal capital of the organization, neither were money or tangible belongings, but it was the intellectual capital the most valuable belonging of any organization (**Mofargy & Saleh 2003**)

Bontis (2003) conducted a study on the relationship between intellectual capital and organizational performance. In his study, **Bontis** established that a mutual relationship does exist among the elements of intellectual capital and the capital has a positive relationship with business performance. **Swart (2006)** did an evaluation on intellectual capital and established that intangible assets are important in the creation of a competitive advantage. In his study, **Swart (2006)** also established that intellectual capital can help in solving the challenges that face businesses in the dynamic economy (**Abdulaali,2018**).

The intellectual capital presents a group of people who own knowledges, experiences and achievements which contribute in organization's performance, which involves after that, the development of their societies and the whole world (**Hayjan, 2007**).

According to **Choong (2008)**, intellectual capital refers to the intellectual assets that have been captured, formalized and even leveraged. The intellectual materials help in creating wealth and they help to produce high valued assets. Intellectual capital in a business includes the wealth of the ideas and the ability for innovation which highly determines the future of the firm. According to, **Stewart (2008)**, intellectual capital refers to skills, knowledge, experience and customer relationships that offers an organization with a competitive advantage over the competitors (**Abdulaali,2018**).

Al Hilali (2011) says that the intellectual capital could be:

- A part of the human capital of the organization and not a synonym of it, because not all the workers make part of the intellectual capital;
- A group of workers in the organization who have useful cognitive abilities which could be employed only by them;
- Pointing to create new ideas or improving existing ones in order to achieve better quality in products and services;
- Not concentrated or concerned by a specific level, or category of the organization;
- Not related to a higher academic degree, even if the existence of higher degrees and training are enhancing factors for the existence and the improvement of knowledge within the group of workers representing the intellectual capital;
- Not easily replaced even on individual level, because worker's reputation could be a very strong attraction factor for the costumers, as it is the case for a good doctor in some hospital.

Research conducted by the Organization of Economic Cooperation and Development in 2009, indicates that investing in intellectual capital has a lot of benefits for an organization, Such as: competent employees, motivated workers, increased customer loyalty, competitive advantage and better utilization of the company resources for a better outcome. Given the benefits that come about from investing in intellectual capital, the managers have to identify the intangible resources that are important in creating and maintaining a competitive advantage within the organization (**Daum, 2003**). The management can use the experiences of other organizations to gain knowledge of the intangible resources (**Abdulaali, 2018**).

Mahoney & Kor (2015), claim that organizations increasingly understand how intellectual capital is important in creating economic value and power (**Abdulaali,2018**). **Joia, (2007)** states that successful organizations of today are those that recognize that intellectual capital plays an important role in creating value as well as leverage (**Abdulaali,2018**). In order to survive in the marketplace that has become more and more competitive, organizations need programs of continuous improvement so as to improve the competencies of the employees. Also, organizations need to have effective systems and processes that are effective and efficient (**Nahapiet, 2000 in Abdulaali, 2018**).

a. The importance of intellectual capital

The importance of intellectual capital comes from its ability to upgrade the organization to a completely different level of performance and competitiveness, so it is a strategic asset for the organization which not only makes her more competitive and successful, but also could be beneficial to social development in general.

Researches has become more and more concentrated in the fewer last decades on the intellectual capital and on the most effective ways to improve and manage ideas, and innovations in this area. This took these efforts toward two connected paths (**Rawia, 2005**):

- The knowledge and mental strength path: that concentrates on creating and enlarging the knowledge field of the organization;

- The dependence on resources path: by paying attention on how to create more profits from a special combination of tangible and intangible resources.

We can say that the importance of the intellectual capital varies and depends on the actual value that the organization wants to create from investing in it, which could have several forms (**Rawia, 2005**):

- Making profit
- Achieving competitive advantage
- Improving relationships with customers and suppliers
- Improving productivity and minimizing costs
- Improving employees' orientations and external mental image (public picture)
- Maximise the market share and building a strong competitive position

b. Elements of intellectual capital

Researchers' efforts have been concentrated in the mid-nineties of the past century on measuring and assessing the intellectual capital. A lot of models emerged, the simplest one was the one suggested by **Stewart (1997)**, and he shows that the intellectual capital is composed by three elements:

- Human capital: is the responsible element for thinking, creating and innovating inside an organization;
- Structural capital : is the capital that could not be transferred outside the organization which contains data, informations, brochures, organizational culture, registered innovations, strategies, structures and processes;
- Social capital: it represents teamwork and trust within employees.

Later came **Mouritsen & Larsen (2001)** who presented a similar model but they suggested "Market capital" instead of "social capital", which represents the market share, the ability to gain new costumers and how to keep the current ones.

To cover all the gaps of the previous model, a group of researchers (**Chen, Zhu and Xie 2004**) developed a new model that evolved indexes and general orientations instead of economic value, a model that will allow organizations and countries by modifying their strategies concerning knowledge to achieve sustainable competitive advantages. In this model the intellectual capital is:

- Human capital: it represents abilities, creations, orientations and employee skills;
- Market capital: it represents marketing skills, market concentration and customer loyalty indexes;
- Innovative capital : it represents achievements and innovative culture

- Structural capital: it represents organizational culture, structures, processes and the information system

Azawi (2013) says that the intellectual capital contains five principal elements:

- Intellectual assets : it is the independent knowledge that the organization owns like plans, patterns, engineering designs and computer programs
- Human capital: it is the knowledge saved in employees' minds which is dependant to them and it represents skills, creations and experiences.
- Structural capital : it is the ability to improve initiatives, taking advantage from new ideas and adequate tools of change
- PR capital : it is the relationships between the organization and its customers and competitors
- Intellectual property: like patents, trademarks, investment rights....

c. Building and developing intellectual capital

Organizations strives to be in the lead in serving their customers to gain the largest market share possible, for that they concentrate on the intellectual capital as a source for new creations and innovations. To build and to motivate a strong individual capital researchers suggested the following steps (**Rabiaoui & Abbas,2015**):

- Promote creativity and innovation:

innovation is the ability to create new ideas by the use of learning and intelligence; to create and develop products to meet the needs of customers and enlarge the incomes. Often, the creative work face a "different entries of individuals" kind of troubles issued from their different backgrounds.

Creating a promoting environment for innovation and creativity makes the employees more productive and more passionate about the work, giving the best of their minds and hearts by committing to the organizational mission. To do that there are four strategies:

- ✓ 1st strategy: procedures to promote new ideas like "brainstorming", which is an effective way to encourage team thinking and generating ideas that will be discussed after that by giving notes and opinions that makes them clearer and stronger, in a reassuring climate without criticism or control
- ✓ 2nd strategy: choosing from the beginning the right staff with the right skills to achieve creativity success
- ✓ 3rd strategy: changing the organizational structure, organisation, climate, professional culture in a way promoting creativity management

- Pecuniary rewards

Organization should take in consideration the share of her intellectual capital in the profit made by their efforts in creation of new product and services "the more they bring to the organization, the more they earn!"

- Liberty of expression

Giving the employees the liberty to express themselves and their opinions make them more involved in organizational success and more motivated.

- **Relationship integration**

Integration means unity, coordination and participation in thoughts and sayings. Because what makes a team successful is the ability of sharing and the synergy flowing between them, which create faster and better methods for knowledge and creativity to prosper.

- **Coaching and learning programs**

Coaching mission is complementary to all organizational functions, it guarantee skills promotion and transfer them to more appropriate positions. Learning and expertise are the tools for more mental and research susceptibility which could not be reached easily. To achieve that, more promoting function should be attributed, representing more challenge in their execution and more flexibility to assure the most amount of learning possible and the creation of an extra value in term of intellectual capital.

- **Developing IQ**

The idea behind the conviction that human IQ is invariant is completely false and out of reality. More enhancing methods for learning, thinking, creating, exchanging and participating could be great stimuli to increase human IQ.

2. Competitive advantage

Let's agree that the competitive advantage is not a point that we want to achieve, but it is a dynamic infinite process aiming to achieve sustainable supremacy and excellence for the organization facing her, competitors, customers, suppliers and the other forces in the market. A lot of works arises to define this concept; we choose some of them to clarify it.

Mahmoud (2006) gives a the simplest most traditional type of definition for the competitive advantage, saying "it is the ability to produce products and services with good quality , appropriate price in the right timing, which means meeting consumers' needs in a more effective way than the other organizations"

Seleim & al (2007) says "it arise when the organization discover new more effective ways than the ones used by competitors"

Bataineh & Al Zoabi (2011) refer to it as: "a feature or element of superiority of the organization achieved by following a specific strategy to compete"

The first definition concentrates on quality and price to meet consumers' needs, the second one concentrates on creativity and its role in exceeding competition, and the third one concentrates on the competitive strategy in achieving excellence. So we can say that the competitive advantage is "an element of excellence for the organization that could emerge from following innovative strategies aiming to meet the needs of customers in a better way than competitors"

a. The importance of competitive advantage

The importance of the competitive advantage lays in the following (**Morabai, 2012**):

- It represents an important criterion to distinguish the successful organization which have unique and original models hard to imitate or simulate;
- It creates a distinctive value for the customer through the strive to procure more and more satisfaction for him, which make her products and services irreplaceable;
- Gives the organization the power of conviction and negotiation facing her customers, suppliers which makes her more able compete;
- Creation of new market opportunities by enhancing the mental image of the organization;
- Being ahead of competitors makes the organization the one who lead the market and opens new investment opportunities and horizons in front of her before the others

b. Sources of the competitive advantage

Exceeding the competition refers to many factors or sources, which could be in relation for example with products, services, processes, organisation, marketing or even relations...those sources might be divided into two categories (internal, external), all beside the classical norms like: economical abundance, an increasing in the productivity of the factors of production and lower costs (**Berni, 2007**).

But **Porter** restricted the sources of the competitive advantage to costs and differentiation, considering them the main influencers on price levels.

Costs could be a source of competitive advantage, if the organization provides low priced products by effectively and efficiently controlling production costs, technology and the used skills. That gives the organization the choice to lower the prices without effecting profits.

On the other hand, **Differentiation** is accomplished when the organization is able to provide distinctive products and services, with specific characteristics that make them more valuable to the customer in comparison to the products and services in competition.

But there are other sources that could make the organization create a strong competitive advantage, **Abboud (1999)** mention the following:

- Innovation: that means the constant improvement by internalizing new ideas on products and services which guarantee the organizations' sustainability;
- Time: it is considered as a huge advantage that could be achieved by lowering the time lapse of the production cycle, decreasing customers' waiting time for the product or the service.
- Knowledge: that means the experience and expertise accumulated at the employees of the organization

In this paper we are going to concentrate on the intellectual capital as a source of competitive advantage and how it is used in the private school in study.

c. Achieving competitive advantage through intellectual capital

In the actual business environment flexibility, proactivity and diversity of the strategies facing the competitors will be critic keys to success, since markets are growing, technologies are evolving, products are outdated and processes are changing in a really fast pace. In those circumstances, knowledge rose as a tool of success and competitiveness held only by the intellectual capital of the organization. For example, businesses can register trademarks, patents and even copyrights which hinders competitors from imitating the products and the works of the business.

From those goings, organizations strived to build knowledge and compete for the information, thus by adopting a set of promoted methods of development, and investing in knowledge areas and intangible elements has become of great importance by encouraging creativity and innovation in the process of human resources' promotion (**Abdel Hamid .A, 2013**).

Mustafa A (2004) indicates that the organisation's ability to convert the intellectual capital to a value depends on the nature of the value targeted, which can be: economic value (eg: profits), strategic value (eg: competitiveness), market value (eg: market share, PR, mental image), exploitation value (eg: productivity, cost lowering).

We've elaborated a way to create a competitive advantage through intellectual capital promotion basing on the work of **Abdel Hamid .A (2013)**:

- **Human capital as a mechanism to enhance competitive advantage**

Investing in human capital by installing; recruitment mechanisms to choose creative skilful employees, and internal and external coaching programs that enhances creativity, innovation, ideas' sharing, coordination and synergy in the organizational climate which can affect the bio-activities of the organization and attract more customers by creating more value for them in the products or the services they purchase. Eventually, this would lead the organization to exceed her competitors in an inimitable way (**Bontis & al,2000**).

- **Innovation as a mechanism to enhance competitive advantage**

Innovations are key factor for the organization to succeed, beat the competition, preserve her clients and expand her market share. The higher the speed of innovating, the higher the organization become competitive, so it should motivate her employees for continuous creativity and innovation to sustainable improvement in products and services (**Bin Ahmed & Mushar, 2011**)

- **Organizational learning to enhance competitive advantage**

Abboud (2007) says that learning is the only way to spread knowledge considering it as the other face of creativity, which could be spread in the organization, reflect positively on performance and support effectively in the achievement of the competitive advantage.

In the light of the previous researches we can conclude theoretically that knowledge is the main key to enhance competitive ability and achieve the competitive advantage, for that the management of an organization should strive towards recruiting as well as grooming the best team in an organization so as to get a competitive advantage in the organization. In addition, it's important to ensure that knowledge is appropriately stored through intellectual assets which can further improve the competitive position of an organization. Intellectual assets of an organization create value and also increase the financial worth in the organization (**Abdulaali, 2018**).

III. METHOD AND PROCEDURES:

In this study we've used a descriptive analytical method to reach its objectives, for that we've consulted several theoretical references to put forward the research framework and roots in the literature. Then we've elaborated a questionnaire to test the theoretical results that we've achieved empirically.

The questionnaire designed in a manner that serves the purpose of the research, it includes (20) questions distributed on the variables of our research

A number of statistical tools have been used by the SPSS program:

- Frequencies, percentages & Means: to see the tendencies of the respondents for more help in interpretations later.
- Crombach's Alpha: To delete the items that makes the internal consistency between statements less good.
- Linear regression: to test the relationship and the nature of the effect between the variable of the study.

1. Architectural studies' firm « El Bina »

The firm was created in 1997 by Mr Mekhellet M ,“the manager”, it is specialized from its beginnings in architectural studies, civil engineering and public works.

The firm mainly worked in the field of urban development and housing with the following state bodies, respectively: OPGI Djelfa, DEP Djelfa, APC Messaad, Das Djelfa, DUAC Djelfa, Transportation Directorate Djelfa, ministry of commerce, ministry of industry and mines, tourism directorate Djelfa, DIM Djelfa, DSP Djelfa, and APC Djelfa , by constructing:

- More than 4170 apartment,
- 14 educational organisations (4 High schools, 5 middle schools, 4 school complexes and a medico-educational center for children with special needs)
- Supplying equipment for more than 25 public and private organizations (security service offices, road stations, laboratories, hoteling needs..etc)

2. The staff of the firm:

Our studied firm is a private specialized office, it is have a small number of specialized workers presented in the next table:

Table 01 : The employees of « El Bina » Firm

Function	Number of workers
Architect	03 (including the Manager M. Mkhellat)
Civil engineer	01
Building technician	02
quantity surveyor	01
Technician in public works	01
Σ	08

Source: the firm documents

Our questionnaire has touched all the workers in the firm including their manager and we have got a total response of 07.

IV.STUDY RESULTS (ANALYSIS AND DISCUSSION) :

1. Descriptive results:

a. Descriptive results for demographic variables: sex, age, studies & experience

To clarify the characteristics of the sample and highlight the frequencies and percentages of the distribution of individuals on the selected sorting variables, we have prepared the following table:

Table 02: Distribution of sample individuals according to demographic variables (n=07)

variable	Categories	frequencies	%
Sex	Male	7	100
	Female	0	0
Age	Less than 25	0	0
	26- 40	3	42.85
	41-50	2	28.57
	51 and above	2	28.57
Studies	High school	0	0
	Diploma	0	0
	Masters	0	0
	PHD	0	0
	Engineer Formation	4	57.14
Experience	Less than 5	3	42.85
	6-10	1	14.28
	More than 10 years	5	71.42

Source: Prepared by researchers using SPSS outputs

The table indicates that 100% of the employees are males in the target sample, and this may be due to the nature of the work to be carried out depending on the field activity of the institution or to the employment applications submitted, which may contain a higher percentage of males.

As for the age groups, the category (from 26 to 40 years) was the largest with a rate of 42.85%, this indicates that most of the group members are young men, but the remaining two groups have equal proportions making both a percentage of 57.14%. So we can say that the answers we will get might be more mature, honest and well-thought.

As for the academic qualifications, we found that the majority of the target group are engineers at a rate of 57.14%, which makes us more confident of the quality of the answers.

As for experience, the highest percentage was the category of the most experienced people with 71.42%. We can say that the answers we've got were based on good experience in the firm, and a great knowledge of the relations and the behaviours of both the employees and the leader.

b. Descriptive results for the study variables: Intellectual capital & Competitive advantage

Table 03: Distribution of the answers for the study variables' items

		%						
	Items	coding	1*	2**	3***	4****	5*****	Mean
Attracting intellectual capital (X1)	The organization works to attract human elements distinguished by skills and experiences in the field of the work	X1-1	–	–	42.9	57.1	–	3.57
	The organization works to attract human elements with technical skills in the fields aiding the work	X1-2	–	–	28.6	57.1	14.3	3.85
	The organization has a human resources information system characterized by accuracy, modernity and speed of execution	X1-3	42.9	42.9	–	14.3	–	1.85
Building intellectual capital (X2)	The organization pays attention to the ideas and solutions proposed by the distinguished workers to tackle work problems	X2-1	–	–	–	85.7	14.3	4.14
	The organization provides training workshops for new employees to improve their skills	X2-2	85.7	14.3	–	–	–	1.14
	The organization provides training for old workers to renew their expertise and information	X2-3	85.7	14.3	–	–	–	1.14

Activating intellectual capital (X3)	regarding work methods							
	The organization encourages the spirit of creativity and innovation among employees	X3-1	85.7	_	_	14.3	_	2.28
	The organization encourages the establishment of seminars among employees to invest their intellectual energies	X3-2	71.4	14.3	_	14.3	_	1.57
Preserving intellectual capital (X4)	The organization pays special attention to the employee who avoids monotony and routine in carrying out the work	X3-3	_	_	28.6	71,4	_	3.71
	The organization provides incentives to support employees	X4-1	71.4	14.3	_	14.3	_	1.57
	The organization shall consider the employee's wish and ability to perform when assigning tasks	X4-2	_	_	14.3	71.4	14.3	4
Customers capital (X5)	The organization appreciates the efforts of the distinguished employees	X4-3	_	_	14.3	85.7	_	3.85
	The organization works to document customer information (desires and needs)	X5-1	_	85.7	14.3	_	_	2.14
	The organization uses electronic systems and communication sites to reduce the gap between her and the customers	X5-2	_	_	42.9	57.1	_	3.57
Competitive advantage (Y)	The organization seeks to retain its old customers as it seeks to expand its market share	X5-3	_	_	14.3	14.3	71.4	4.57
	Employees strive to find new and innovative ways to work	Y1-1	_	_	_	57.1	42.9	4.42
	Employees do not	Y1-2	_	_	_	14.3	85.7	4.85

hesitate to adopt any change in favor of the organization							
The organization is keen to provide services that competitors cannot emulate	Y1-3	14.3	71.4	14.3	–	–	2.00
The organization has the largest number of loyal customers over the other competitors	Y1-4	–	–	42.9	–	57.1	4.14
The organization has the ability to expand its market share by satisfying the desires of its customers	Y1-5	–	–	–	28.6	71.4	4.71

*1=Absolutely disagree

**2=Disagree

***3= Neutral

****4=Agree

*****5= Strongly agree

Source: Prepared by researchers using SPSS outputs

The table above shows, according to the opinions of the respondents that:

- Regarding “Attracting intellectual capital”, the company tends to attract employees with skills and experience in the work field with 57.1%, and to attract employees with technical skills that help in the work with 71.4%.
- With regard to “Building the intellectual capital”, the firm tends with 100% to listen to the ideas and solutions proposed by distinguished employees to solve work problems, and 100% to not provide training for new employees or even old employees. According to the manager, working in a market place with no challenges in the matter of designs and with limited budgets implicates less training and less change.
- Regarding “Activating the intellectual capital” the firm tends, according to 85.7%, to discourage creativity and innovation among the employees and not to establish seminars to invest intellectual energies , this may be due to the fact that the office has more dealings with public bodies that impose certain conditions in terms of designs and work techniques. And it tends, with a rate of 71.4%, to give importance to the employee who moves away from the monotony and routine in carrying out the work.
- With regard to “Preserving the intellectual capital”, the company tends to take the capabilities of employees into consideration in assigning tasks and appreciating the efforts of distinguished employees, as it tends to do so by 85%. This contrasts with the lack of incentives to support employees at a rate of 85.7%, possibly because employees perceive the incentives provided as unsatisfactory.

- With regard to "Customers' capital", the firm tends not to document the information of its clients' desires and needs by 85.7%. This may be due to the fact that its clients are public bodies that have predetermined conditions that it cannot control. And it tends to maintain its customers as it seeks to expand its market share by 85.7%, and to reduce the gap between her and them through the use of electronic communication systems, by 57.1%.
- In terms of competitive advantage, employees seek to find new and creative ways to work at 100%, They also do not hesitate to adopt any change in favour of the firm by 100%.But , with 85.7% of employee opinions, the firm is not very keen on providing services that competitors cannot replicate, this is in contrast to its ability to expand in the market, according to their opinions too by 100%, And this may be due to the fact that the main clients of the company are public bodies that have pre-defined conditions in terms of designs and working techniques.

2. Internal consistency validity

The Cronbach's alpha coefficient was used to verify the internal consistency of the questionnaire's axes, and to identify the contribution of the phrases composing the dimensions of the intellectual capital and the competitive advantage in their constancy and then delete the expressions that can reduce or weaken the value of Cronbach's alpha. So a total number of 7 items were kept by purifying the intellectual capital' statements and getting a Cronbach's alpha= 0.946, We summarize it in the following table:

Table 04: statements contribution in the intellectual capital' consistency

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The organization has a human resources information system characterized by accuracy, modernity and speed of execution (X1-3)	9.8571	16.476	.839	.940
The organization provides training workshops for new employees to improve their skills (X2-2)	10.5714	21.286	.997	.942
The organization provides training for old employees to renew their expertise and information regarding work methods (X2-3)	10.5714	21.286	.997	.942
The organization encourages the spirit of creativity and innovation	9.4286	17.952	.996	.923

among employees (X3-1)				
The organization encourages the establishment of seminars among employees to invest their intellectual energies (X3-2)	10.1429	15.476	.913	.934
The organization provides incentives to support employees (X4-1)	10.1429	15.476	.913	.934
The organization works to document customer information (desires and needs) (X5-1)	9.5714	21.286	.997	.942

Source: Prepared by researchers using SPSS outputs

And we've got a total number of 4 items was kept by purifying the competitive advantage' statements and a Cronbach's alpha= 0.794. We summarize it in the following table:

Table 05: Statements contribution in the competitive advantage' consistency

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Employees strive to find new and innovative ways to work (Y1-1)	13.7143	2.905	.706	.713
Employees do not hesitate to adopt any change in favour of the organization (Y1-2)	13.2857	3.571	.533	.800
The organization has the largest number of loyal customers over the other competitors (Y1-4)	14.0000	1.333	.810	.750
The organization has the ability to expand its market share by satisfying the desires of its customers (Y1-5)	13.4286	2.952	.767	.702

Source: Prepared by researchers using SPSS outputs

3. Analysing the impact of intellectual capital in achieving competitive advantage

In this part, we aim to determine the relationship between the two variables, and how the intellectual capital can affect the competitive advantage in the studied case according to the following hypothesis:

Hypothesis: There is a statistically significant effect of the intellectual capital' dimensions on the competitive advantage in the studies and construction firm under study.

Where we divided this hypothesis according to the theoretical results reached into five basic assumptions according to the number of adopted dimensions in the intellectual capital variable:

H1: There is a statistically significant effect of attracting the intellectual capital on the competitive advantage in the studies and construction firm under study.

H2: There is a statistically significant effect of building the intellectual capital on the competitive advantage in the studies and construction firm under study.

H3: There is a statistically significant effect of activating the intellectual capital on the competitive advantage in the studies and construction firm under study.

H4: There is a statistically significant effect of preserving the intellectual capital on the competitive advantage in the studies and construction firm under study.

H5: There is a statistically significant effect of customers' capital on the competitive advantage in the studies and construction firm under study.

To approve or reject these hypotheses, we've applied linear regression to illustrate the change in the competitive advantage in terms of the intellectual capital' dimensions, and we've fixed the level of significance at $\alpha=0.1$ due to the small number of interviewees.

a. The effect of attracting the intellectual capital on the competitive advantage

Through the table 06 we can say that the relation between the two variables is not statistically significant $F=0.439$ with a significance of 0.537.

Table 06 : The main indicators of linear regression of "The effect of attracting the intellectual capital on the competitive advantage"

Dependant variable :	F	Sig	R	R ²	Coefficient	t	t-significance
Attracting the intellectual capital							
Independent variable: competitive advantage	0.439	0.537	0.284	0.081	-0.284	-0.663	0.537

Source: Prepared by researchers using SPSS outputs

So we reject H1 and say that there is no effect of attracting the intellectual capital on the competitive advantage in “El Bina” firm.

b. The effect of building the intellectual capital on the competitive advantage

Through the table 07 we can say that the relation between the two variables is not statistically significant $F=3.758$ with a significance of 0.110.

Table 07 : The main indicators of linear regression of “The effect of building the intellectual capital on the competitive advantage”

Dependant variable :	F	Sig	R	R ²	Coefficient	t	t-significance
Building the intellectual capital							
Independent variable: competitive advantage	3.758	0.110	0.655	0.429	-0.655	-1.938	0.110

Source: Prepared by researchers using SPSS outputs

So we reject H2 and say that there is no effect of building the intellectual capital on the competitive advantage in “El Bina” firm.

c. The effect of activating the intellectual capital on the competitive advantage

Through the table 08 we can say that the relation between the two variables is not statistically significant $F=3.252$ with a significance of 0.131.

Table 08: The main indicators of linear regression of “The effect of activating the intellectual capital on the competitive advantage”

Dependant variable :	F	Sig	R	R ²	Coefficient	t	t-significance
Activating the intellectual capital							
Independent variable: competitive advantage	3.252	0.131	0.628	0.394	-0.628	-1.803	0.131

Source: Prepared by researchers using SPSS outputs

So we reject H3 and say that there is no effect of activating the intellectual capital on the competitive advantage in “El Bina” firm.

d. The effect of preserving the intellectual capital on the competitive advantage

Through the table 09 we can say that the relation between the two variables is statistically significant $F=5.855$ with a significance of $0.06 \leq \alpha=0.1$, which confirms that preserving the intellectual capital has a significant effect on the competitive advantage. The coefficient of correlation $R=0.734$ shows that this effect is relatively strong.

As for R^2 , it shows us the ratio of the data of the dependent variable interpreted through the independent variable. We can say that the model explains 0.539, i.e 53.9% from the variance of the competitive advantage which is a decent percentage from the total variance explained by other variables.

After purification the dimension of preserving the intellectual capital has become constituted only by (X4-1) which is (**The organization provides incentives to support employees**), and we've got a negative response from the employees because 85.7% of them were unsatisfied from the incentives given by the firm. That's why the coefficient of regression shows a negative value $\beta = -0.734$, which indicates that the more the firm continue in providing unsatisfactory incentives the less it gets a competitive advantage.

Table 09: The main indicators of linear regression of "The effect of preserving the intellectual capital on the competitive advantage"

Dependant variable :	F	Sig	R	R ²	Coefficient	t	t-significance
Preserving the intellectual capital							
Independent variable: competitive advantage	5.855	0.06	0.734	0.539	-0.734	-2.420	0.06

Source: Prepared by researchers using SPSS outputs

So we approve H4 and say that there is a relatively strong effect of preserving the intellectual capital on the competitive advantage in "El Bina" firm. But this effect is negative through giving unsatisfactory incentives to the employees which makes the firms' competitive advantage less.

e. The effect of customers' capital on the competitive advantage

Through the table 10 we can say that the relation between the two variables is not statistically significant $F=3.758$ with a significance of 0.110.

Table 10: The main indicators of linear regression of "The effect of customers' capital on the competitive advantage"

Dependant variable : Customers' capital	F	Sig	R	R ²	Coefficient	t	t-significance
Independent variable: competitive advantage	3.758	0.110	0.655	0.429	-0.655	-1.938	0.110

Source: Prepared by researchers using SPSS outputs

So we reject H5 and say that there is no effect of activating customers' capital on the competitive advantage in "El Bina" firm.

V.CONCLUSION:

The study has analysed and concluded the answers of the sample members about the questionnaire statements, on the basis of which the role of intellectual capital was diagnosed in creating a competitive advantage for "El Bina" firm for architectural studies and construction. We have found that the clients the company deals with limits its capabilities and its tendencies to invest in intellectual capital. Whereas, the firm' almost exclusive approach to dealing with public bodies imposes specific conditions on her in terms of engineering and technical designs, as it has been shown to us through the ratios of the answers that the firm:

- Does not provide training to employees in new technologies in the field of work.
- Does not encourage creative ideas.
- Does not encourage the establishment of seminars to invest the intellectual energies.
- Is not eager to provide employees with satisfactory incentives.
- Does not provide services that cannot be imitated by competitors.

This and despite the presence of many elements of intellectual capital, such as: attracting the skills and experiences in the field of work; listening to the ideas and solutions provided by employees; appreciating the employees who move away from routine and monotony at work; taking into account the capabilities of its employees in delegating the work; great willingness of its employees to find creative ideas and not hesitating to adopt any change in her favour; and her market expansion capabilities, but according to the results of the regression analysis they had no statistically significant effect on creating competitive advantage. Unlike just one item, we found that the company's lack of keenness to provide satisfactory incentives for her employees explains 53.9% of the competitive advantage variance, as it has a negative impact on it according to the regression coefficient $\beta = -0.734$. So the more the firm ignore satisfactory incentives the less she achieves a competitive advantage.

Recommendations:

The study suggests the following recommendations:

- Providing employees with satisfactory encouragements and incentives and not focusing on material incentives without other psychological, temporal, professional or other kinds of incentives.
- Going to a new market that touches both private companies and individuals in order to get out of the framework of the conditions imposed by public bodies which limits the creativity of the company, its encouragement of ideas and investment of intellectual energies and its investment in training and new techniques.
- Utilizing the expertise and capabilities it has in encouraging private organizations, individuals and banks to invest in the field of real estate and building beautiful neighbourhoods and cities. This not only creates a competitive advantage for them, but it also contributes to creating a competitive advantage in the province of Djelfa, and, encourages tourism and increases cash flows.

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