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INTELLECTUAL CAPITAL AND THE COMPETITIVE ADVANTAGE: MANAGERIAL PERSPECTIVE

Saleh Abdullah Al Thnayan
Faculty of Economics and Administration, King Abdulaziz University
E-mail: salehalthnayan@gmail.com

Dr. Mohammad Asif Salam (Co - author)
Faculty of Economics and Administration, King Abdulaziz University
E-mail: masalam1@kau.edu.sa

ABSTRACT

The purpose of this paper is investigating the managerial perspective of the Intellectual Capital (IC) effect on the Competitive Advantage (CA). The researcher aims to determine the influence of IC three-dimension (Human Capital (HC), Structural Capital (SC), and Relational Capital (RC)) in achieving the CA through its dimensions (quality (Q), Cost (C), and Flexibility (F)) in local financial brokerage services companies.

The descriptive and inferential approach was used to work toward this goal, relying on a simple random sample of managers in the upper and middle levels in Saudi financial brokerage services companies by (352) managers. An electronic questionnaire was distributed for this purpose

The study reached a set of results: The relative importance of the dimensions of the IC as an independent variable generally the same. A significant relationship between all independent variables and dependent variables have resulted.

The study recommended working to enhance IC dimensions by understanding the importance of these dimensions to increase efficiency and effectiveness and achieve CA. Besides, the Saudi financial brokerage services companies are recommended for documenting their procedures in directories accessible to employees, delegate authority, and give them a degree of freedom in making decisions about their daily work.

Keywords: Human Capital (HC), Competitive Advantage (CA), Relational Capital (RC), Structural Capital (SC), Intellectual Capital (IC), Quality (Q), Cost (C), Flexibility (F).

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الملخص

تهدف هذه الورقة إلى دراسة المنظور الإداري لتأثير رأس المال الفكري على الميزة التنافسية. يهدف الباحث إلى تحديد تأثير رأس المال الفكري من خلال أبعاده الثلاثة (رأس المال البشري، رأس المال الهيكلي، رأس المال العلائقي) في تحقيق الميزة التنافسية من خلال أبعادها (الجودة، التكلفة، والمرونة) في شركات خدمات الوساطة المالية سعودية المحلية.

تم استخدام المنهج الوصفي والاستنتاجي للعمل على تحقيق هذا الهدف بالاعتماد على عينة عشوائية بسيطة من المديرين في المستويات العليا والمتوسطة في شركات خدمات الوساطة المالية السعودية من قبل (352) مدير. تم توزيع استبيان إلكتروني لهذا الغرض.

توصلت الدراسة إلى مجموعة من النتائج: الأهمية النسبية لأبعاد رأس المال الفكري كمتغيرات مستقلة هي نفسها بشكل عام. نتج عن علاقة مؤثرة بين جميع المتغيرات المستقلة والمتغيرات التابعة.

وأوصت الدراسة بالعمل على تعزيز أبعاد رأس المال الفكري من خلال فهم أهمية هذه الأبعاد لزيادة الكفاءة والفعالية وتحقيق الميزة التنافسية. إلى جانب ذلك، تُنصح شركات خدمات الوساطة المالية السعودية بتوثيق إجراءاتها في أدلة يسهل الوصول إليها للموظفين، تفويض السلطة، ومنحهم درجة من الحرية في اتخاذ القرارات المتعلقة بعملهم اليومي.

الكلمات المفتاحية: رأس المال البشري، الميزة التنافسية، رأس المال العلائقي، رأس المال الهيكلي، رأس المال الفكري، الجودة، التكلفة، المرونة.

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1. INTRODUCTION

In contemporary times, organizational resources, mainly intangible, are likely to sustain a superior position. Intellectual Capital (IC) is recognized as a vital intangible resource for an organization to become competitive (Tidd et al., 2005). The organization's survival depends on its capability derived from IC (Rodrigues et al., 2010). IC is regarded mainly as a three-dimensioned idea comprising structural, human, and relational capital (Kavita & Sivakoumar, 2009). However, its components of comparative implication are diverse in a different setting. Wu et al. (2008) stated that only organization that aims at improving its IC continuously could endure being competitive in the current strategic environment. Otherwise, it is likewise said that IC development fosters innovation which enhances people's learning skills in an organization. organizational learning is the result of interplay between persons (human and structural capital). A relational capital result, facilitate innovation by developing or paving the path for workers to function meritoriously with precise objectives and to propose several worthy exceptional ideas pegged on their experience, leaning, proficiency, and skills (Kamath, G., 2007).

IC literature reveals significant research gaps. Hernandez and Noruzi (2010) stated that IC is a newly evolving model, and there is a need to expound this model theoretically. Likewise, Tseng & Goo (2005) implied the necessity to grasp how IC fosters importance. Zerenler et al. (2008), Curado & Bontis (2007) emphasized the necessity to gauge, appraise, and organize IC in organizations. Kamukama et al. (2011) highlighted the necessity to examine the influence of IC on the organizational competitiveness and performance. Ahangar (2011), and Maditinos et al. (2011), emphasized the importance of examining IC impact on business performance, competitiveness, and innovation. The authors examined that competitiveness is attained by organizations that successfully manage their intellectual resources in terms of strategic aptitudes, technological proficiencies, knowledge and experience, leading to better organizational performance. By exploring many articles on this topic, it seems that no earlier research studies the influence of three specific IC aspects (human, structural, and relational) in achieving the Competitive Advantage (CA) through its specific dimensions (quality, cost, and flexibility). Additionally, no research had studied

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this phenomenon in Saudi Arabia. These may give uniqueness to this study and strive for the researcher to fill the gap.

This study targets to identify the managerial perspective of the IC effect on Saudi financial brokerage services companies' CA by identifying the extent of applying the three dimensions of IC (human, structural, and relational capitals) in these companies. A descriptive and analytical approach was used to achieve this objective based on a simple random sampling of employees at the top and middle administrative levels in these companies. A specially designed questionnaire was distributed to them for this purpose. Based on the objective, the research statement can be formulated in the resulting central question: What is the influence of IC in its three factors (human, structural, and relational) in realizing CA through its dimensions (quality, cost, and flexibility) in local financial brokerage services companies?

The practical importance of this study comes from as it goes beyond just reviewing the IC modem and its importance from a theoretical perspective to exploring the importance of applying the IC at different level of organization. The extent of applying in the upper and middle management levels as fully or partially contributors in decision-making and setting plans, policies and strategies for organizations, the possibility of benefiting management leadership in local financial organizations, and how to achieve CA through IC. The study results put a hand on the defects in these organizations and the study population with the possibility of generalizing its results more broadly. It also enable organizations to direct their resources and make the best use to achieve their organizational goals.

1.1 Intellectual capital: Kim et al. (2011) is one of the chief contributors to developing the IC concept by asserted that IC as a non-money resource ultimately reaps economic gains in the future. All the models rotate around the function of intangibility and value formation. Amongst the different topologies recommended for IC categorization, a three-directional outlook which comprises human, inter-personal and structural capital has attained a specific extent of accord amongst many scholars such as Bontis (2000), Kavida and Sivakumar (2009). apart from the three acknowledged dimensions, other aspects like originality, organizational, procedure, customer, and social capital of IC are likewise stated by scholars like Chen (2008), Zhou & Fink (2003), and Dzinkowski (2000). All of these aspects are entwined with the three key IC aspects. For instance, structural capital counts

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all organizational elements aspects (hardware, software, and procedures). Likewise, inter-personal capital is perceived from a broader lookout comprising customer and social capital. Therefore human, inter-personal and structural elements of IC are integrated with the study.

1.1.1 Human capital (HC): is a crucial element and driving force for IC's inter-personal and structural elements (Li and Chang, 2010). Isaac et al. (2010) illustrated HC as the organizational insight the workforce has but never stay in the organization when at home. Halim (2010) highlighted that HC is the workforce contribute into the value-added procedures and comprise of professional competency, workforce incentives and leadership capability. Also linking HC to insights and aptitudes that individuals possess, Halim (2010) and Li and Chang (2010) have linked it to people's proficiencies and know-how to produce value. Notably, HC is likened to the assortment of dispositions, aptitudes, competency and skills to add to organizational output. HC is perceived as how successfully an organization utilizes workforce experiences, aptitudes, capability, and creativity in making organizational values. Amongst diverse features, education assumes a vital function in fostering proficiency and aptitude face to face human capital. The quality of formal educational programs and description in the first phases and experiential studying pave the way for IC advancement.

1.1.2 Relational capital (RC): This concerns correlation which workforce make with both outside and inside stakeholders. Shih et al. (2010), Cabrita, and Bontis (2008) approved that RC is the insight entrenched in correlations with clients, industry networks, suppliers, or other stakeholders that affect organizational success, make value, and contributes to improved organizational operation.

1.1.3 Structural capital (SC): This idea connects to organizational structure and methods that support workers' efficiency, which remains intact even if workers leave the firm. It is a supportive infrastructure that comprises of frameworks and methods that improve workforce functional capacity. Bontis et al. (2002) defined SC as non-human depots of expertise, including databanks, organizational charts, procedure guidebooks, policies, habits, and any other thing with the higher worth in the firm than its material value. They also stated that if an organization has inadequate methods and practices, the generally IC will not grasp its most profound capacity.

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1.2 *Competitive advantage (CA):* Ma (2004) highlighted CA as a benefit a firm has. He implied CA to the relative positional dominance in the industry, leading an organization to outdo its competitors by offering cost, quality, and flexibility approaches that are tough to copy. The additional specified CA as an outcome resulting from valuable, non-exchangeable, rare, and unique resources are ensuing from the combination of exceptional resources and aptitudes. Zeebaree & Siron (2017) defined CA as a product of the organization's formulating a strategy to provide an added value (High quality, low cost, flexible process) to customers, which leads to its superiority over competitors for a certain period. It is also the continuous ability to face various competition sources in a changing environment, which requires achieving the CA that enables the preservation and continuation of this competitive ability.

1.2.1 Quality (Q): It can be viewed as the driving force to change the main objectives of the organization's services and products, highlighting the increase in value from their point of view. It is positively reflected in its profitability, survival, continuity, and prosperity in the working markets. Besides, quality contributes significantly to raising production efficiency, reducing costs associated with the organization's activities, and reducing the risks that it may be exposed to. Quality refers to materials, manufacturing, and service. Consumers judge the quality of a service or product by fulfilling its intended purpose, as the consumer willing to pay more money in exchange for higher quality products than competitors' products. Quality involves matching design specifications and minimizing defects. Organizations must view quality as an opportunity to satisfy customers, so they must understand their attitudes and expectations towards quality (Russell & Taylor, 2011).

1.2.2 Cost (C): It is considered the sacrifice that organizations make with a group of resources to obtain tangible or intangible benefits to realize the established objectives. The process of cost reduction can be seen as organizations' knack to deliver their services or products at the lowest costs, which leads to achieving the advantage in addition to enhancing and maintaining their market position. Accordingly, low cost is a primary goal for organizations around the world. For organizations that compete directly on price, the cost will be the primary goal of their operations. As the production cost goes lower, the lower the price for their clients (slack, Jones & Jhonston, 2013). It refers to providing a good or service at the lowest cost and in a manner that satisfies internal or external customers. To reduce costs, processes must be designed and implemented

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effectively through rigorous process analysis that includes overheads, workforce, business methods (Krajweski, Ritzman & Malhotra, 2013).

1.2.3 Flexibility (F): has become one of the most prominent management concepts mentioned in previous literature regarding the dimensions of CA in contemporary organizations. Accordingly, flexibility can be considered as the central and fundamental basis for the rapid and accurate response to any changes resulting from the provision of products or services to customers in a manner commensurate with their desires and needs. The concept of flexibility also refers to the corporation's knack to react to product design changes, product size, organization's product mix, and the organization's ability to offer a wide range of products to customers (Stevenson, 2012).

2. LITERATURE REVIEW

The theoretical background of the current study was evolved from the Resource-Based Theory. Resources are essential antecedents for products and organizational performance ultimately (Wernerfelt, 1984; Grant, 1991). This theory addresses the issue of the way to achieve competitive advantage compared to the other competitors. Similarly, the possession and utilization of these unique resources lead to outstanding performance. Various researches explore intangible resources such as IC (human, structural, relation, and technological capital) and their impact on Competitive Advantage (CA) (Asiaei & Jusoh, 2015; Bontis, 1998; Bontis et al., 2000). Thus, the resource-based theory depicts the linkage between dimensions of Intellectual Capital (IC) and Competitive Advantage (CA).

Mulyasari & Murwaningsari (2019), in their study, targeted to demonstrate the influence of IC in its dimensions (human, structural, and relational), and financial performance on the company's value. This study looked at those factors as intangible assets affecting both performance and value, which may implicitly affect the increase in organizations' profits as a positive response to the markets and their influence in increasing the value of CA. Therefore, the main objective was to examine the influence of IC on the organizational value. The study assumed a relational model to study the variables above by relying on the descriptive approach analytical. The study results exhibited that there is a positive consequence of IC on the value of companies. Also, it was found that competitiveness affects the company's value by mediating the companies' performance.

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Yahya et al. (2019) explored the relations between the green IC and CA for Malaysian companies. The study highlighted the importance of green intellectual capital as an essential and worthy resource for business, enhancing companies' performance and competitiveness. The research on green IC addressed both (green human capital, innovative capital, green organizational capital, and green structural capital) as the sub-dimensions effect on the researched companies' CA. Based on the descriptive-analytical approach and survey method, the study sample consisted of (224) managers and then subjected them to the statistical analysis. The study concluded a positive correlation and relationship between these sub-dimensions and better-improving CA among companies.

The transition to a knowledge economy changed the requirements for success in the contemporary business environment. The study of Bakhouche (2019) aimed to demonstrate IC, which comprise of (human, structural, and inter-personal capital) as a source of sustainable CA. The study relied on the descriptive and analytical approach to study the status of IC as a new and essential competitiveness source. The study concluded that there is a continuous developmental transformation in the business world. Besides, the new economy has become based on knowledge and depends on new factors of production. Finally, the increasing competition between companies requires new competitive weapons, concepts, and methods that consider the IC one of them for the transition towards the new economy.

The study of Li & Liu (2018) was directed to identifying the role of IC in managing CA of a group of hotels operating in China as an integrated framework by addressing the IC dimensions represented in (human, structural, customer capital) and the CA dimensions described in (Participation, cognitive heterogeneity, innovation ability). The study sought to explain the unclear effects surrounding IC and its impact on CA. Accordingly, the study depends on the descriptive-analytical method and method of modelling structured equations based on a unique structural pattern to determine the complete and indirect effects of this topic on the CA of (337) hotels in Quanzhou Xiamen, China. The study revealed in its results the reality of a link between SC as a sub-dimension of IC on CA and that IC in all its dimensions contributes to increasing innovative capabilities, which affects overall CA.

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The study by Dahash and Al-Dirawib (2018) aimed to present some ideas about IC concepts in terms of its scopes (HC, RC, and SC) and investigate their relationship with achieving CA in the hotel sector in Iraq. A modified questionnaire was used to assemble Answers from upper and tactical managers in high class hotels in Iraq. The study results exhibited an optimistic and robust relationship between IC and achieving CA. The HC had the maximum input to achieving a CA. The study revealed that IC also had a substantially positive impact on being competitive.

Al Assaf (2019) aimed to identify the influence of IC on Jordanian telecommunications corporations' CA. The study sample entailed of (245) personnel nominated using a simple random sample technique and then distributed a special questionnaire to measure IC and CA. The study found several outcomes, the most prominent of which was the presence of a significant positive influence of IC in general, HC and SC, particularly on the CA and the moderate consequence of RC on CA.

Simultaneously, Bontis et al. (2000) linked CA with HC and argued that HC aids in maintaining CA when workforce adds value to their exceptional attributes. Likewise, they state that the more exceptional aptitudes a person has in the firm, the more competitive milestone that the corporation has. Thus, Saudi financial brokerage services organizations can likewise acquire competitiveness by investing in their HC (workers' proficiencies, knowledge, and expertise), RC (developing long-term consumer interactions), and SC (upgraded systems, structures, and machinery).

3. RESEARCH FRAMEWORK

The study of IC has attracted researcher’s attention in various organizational literature. Many researchers studied the relationship between the typical utilization of IC and organizational performance from different perspectives include CA (Tidd et al., 2005: Wu et al.,2008: Mulyasari & Murwaningsari, 2019: Yahya et al., 2019: Bakhouche, 2019: Li & Liu, 2018: Dahash and Al-Dirawib, 2018: Al Assaf, 2019). Yahya et al. (2019) in their research on green IC addressed HC and SC as dimensions of IC. Bakhouche (2019) demonstrates IC as consists of HC, SC, and RC. Dahash and Al-Dirawib (2018) argued that IC concepts consist of HC, SC, and RC. All of these studies found a positive relationship between IC in its dimensions and CA. For the purpose of current study, the CA will define in three dimensions include quality, cost, and flexibility, which is congruent with the definition by

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Ma (2004), Zeebaree & Siron (2017), (Russell & Taylor, 2011), (slack, Jones & Jhonston, 2013). Therefore, the following hypotheses can be established:

H1: *There is a statistically significant relationship between Human Capital (HC) and Quality (Q) in Saudi financial brokerage companies.*

H2: *There is a statistically significant relationship between Human Capital (HC) and Flexibility (F) in Saudi financial brokerage companies.*

H3: *There is a statistically significant relationship between Human Capital (HC) Cost (C) in Saudi financial brokerage companies.*

H4: *There is a statistically significant relationship between Structural Capital (SC) and Quality (Q) in Saudi financial brokerage companies.*

H5: *There is a statistically significant relationship between Structural Capital (SC) and Flexibility (F) in Saudi financial brokerage companies.*

H6: *There is a statistically significant relationship between Structural Capital (SC) Cost (C) in Saudi financial brokerage companies.*

H7: *There is a statistically significant relationship between Relational Capital (RC) and Quality (Q) in Saudi financial brokerage companies.*

H8: *There is a statistically significant relationship between Relational Capital (RC) and Flexibility (F) in Saudi financial brokerage companies.*

H9: *There is a statistically significant relationship between Relational Capital (RC) Cost (C) in Saudi financial brokerage companies.*

In view of the finding gap, the current study has imagined a study that offers a holistic framework, merging the dimensions of IC and CA (Figure 1). The model demonstrates how the managerial perspective toward IC effects on the CA. The managerial perspectives might be come in a sort of behaviors, policies, and strategies applied through the organization itself. While the CA come in shape of uniqness that produced or provided by the organization to its customers or beneficiaries.

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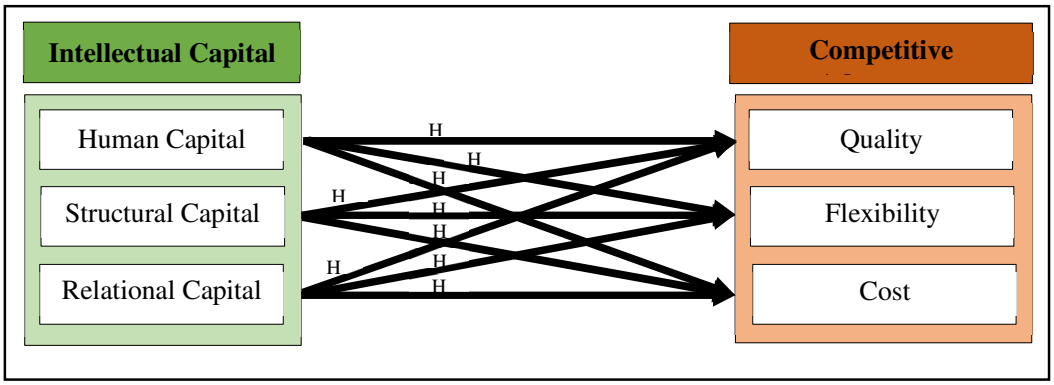

Figure 1: Conceptual Framework

4. METHODOLOGY

The target population of the study is managers working in Saudi financial brokerage services companies. There are 30 financial brokerage services companies working in Saudi Arabia. The total number of employees have a natural managerial job are 1850 persons.

Based on Israel, Glenn D. (1992), the size for the sample for current study was calculated and resulted of 352 responses. Using a simple random sampling method, an electronic questionnaire was distributed to the managers working at different Saudi financial brokerage services companies in Jeddah, Riyadh, and Eastern province. The introduction of the questionnaire informed participants of the purpose of the study. Participation was optional, and the participants were informed that their answers would remain anonymous and confidential. The questionnaire was primarily prepared in English; however, each item was translated into Arabic to make it understandable.

4.1 ***Pilot study:*** The pilot study procedures have been addressed for developing a survey questionnaire (Forza, 2002; Sekaran, 2003; Hinkin, 1998). Forza (2002) guides developing a theory-testing survey study, detailing the need to develop a conceptual model and measurement instrument, carry out a pilot test, collect real data, and evaluate the report and produce a report. In this research, six constructs (HC, SC, RC, Q, C, and F) were operationalized to reduce their abstract concepts into observable and measurable elements. Nevertheless, Rowley (2014) recommends researchers performing theory testing or deductive research to adapt questionnaire items from published research partially or entirely.

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Given a deductive approach of the study, most of the questionnaire items in this research were adapted from published studies (Table 1). Since these studies were mainly performed in different settings, some changes were made using local words such as sentence restructuring.

Table 1. Constructs relating to a study on factors affect IC and CA.

Construct	Items	Reference
HC	5	Choudhury, C. (2010)
SC	5	
RC	5	
Q	4	
C	4	Hernandez, J. and Noruzi, M. (2010)
F	3	Li, Y. Q., & Liu, C. H. S. (2018)

Straub et al. (2004) address systematic methods to test different validity components, categorizing the value of validity, external validity, and validity for a statistical conclusion. Instrumentation validation was carried out before actual data collection to verify that the constructs are likely to be real, consistent, and, more importantly, that the instrument has measured the correct material.

Reliability is a measurement evaluation the degree to which a respondent will answer the same questions in the same way (Straub et al. 2004). In this analysis, the reliability coefficients for each build were stated in the range of 0.74 to 0.964 (Table 3), matching the minimum cut-off value (Sekaran, 2003), which shows the instrument's consistency.

When calculating the Cronbach alpha, three items for HC were extracted due to its impact on reducing Cronbach alpha from 0.746 to 0.733. Besides, one item from the RC causing a reduction of Cronbach alpha from 0.945 to 0.851 and was extracted. Finally, one item from SC reduces Cronbach alpha from 0.962 to 0.953 and therefore extracted.

In contrast, construct validity is an evaluation between constructs to suggest a fair operationalization of a given construct (Cronbach and Meehl, 1955). It investigates whether, in the presence of other constructs' measures, each measure of a specific construct merely fits together and links closely within that specific construct.

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Although assessment validity can be performed during data collection, researchers are recommended to address any potential threats to validity due to the instrument's design ideally at the early stage before investing resources collect the final data (Green et al., 2016). Although measures in this study are mostly adapted from published articles, the risk to validity threat still exists as most of these researches have been conducted in a different context. To determine the pilot study's validity, the researcher used a correlation method to compare item correlation with the total item (Guilford, 1954). (Table 2).

Table 2. Measuring reliability and validity of the questionnaire.

Construct	Items	Cronbach alpha	Total Correlation
HC	Our employees are highly skilled and talented.	0.746	0.616**
	Our employees are considered one of the best in the industry.		0.562**
	Our employees have enough knowledge and skill to finish job.		0.695**
	Employees use new ideas and knowledge to develop a solution.		0.602**
RC	Our employees share information with others and learn from others within their team and department.	0.945	0.851**
	Our employees interact and exchange ideas with cross-functional departments and divisions.		0.857**
	Our employees' partner with customers, vendors, and other alliance partners to develop solutions.		0.868**
	Our employees apply knowledge from one area of the organization to the problem and opportunities in another part of the organization.		0.847**
SC	Our organization uses white paper, case studies, patents as a way to store knowledge.	0.962	0.880**
	Much of our organization's knowledge is contained in manuals and databases.		0.833**
	Our organization has an enterprise information portal having easy access to various information sources.		0.846**
	Our organization embeds much of its knowledge and information in structures, systems, and processes.		0.949**

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Q	Our solutions are very reliable and stable.	0.964	0.927**
	The defect injection rate is below the industry average.		0.940**
	We usually prevent repeat mistakes.		0.903**
	Our acceptance defects density is very low.		0.943**
C	Our solutions are cost-effective.	0.848	0.599**
	The cost of services is one of the lowest in the industry.		0.940**
	The services cost is appropriate to the quality and delivery.		0.688**
	The cost management in our organization is highly effective.		0.866**
F	Our organization offer a flexible solution to customers.	0.936	0.906**
	Our organization deal with market change in a flexible manner.		0.937**
	Our organization offer a variety of services suitable for all customers.		0.837**

*** P-value < 0.001*

5. RESULTS AND DISCUSSION

The data analysis is the phase by which the hypotheses are tested against reality. It follows a structured approach combining concerns of reliability, dimensionality, and quality of the measurement model fit to the theoretical model. By following Roussel et al. (2002) recommendations, the different aspects of the data analysis are presented by the following three-stage process.

Thus, it will first be a question of carrying out Exploratory Factor Analysis (EFA) on the data relating to different constructs included in the research model and measured during the different measurement times. EFA makes it possible to define a space of minimal dimension in which the correlational structure of the indicators can be visualized, so the direction of the hypothetical attributes can be detected (Vautier, et. al, 2005, p. 279). To this end, various criteria used to ensure the dimensionality of the constructs and their reliability. This stage will be followed by a second stage, where Confirmatory Factor Analysis (CFA) has been performed, which will serve not only to guarantee the trait validity of the constructs, but also to compare the structure hypothetical factorial suggested by different theoretical models (Roussel et al., 2002, p. 91). The third stage

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include the effective test of the research model which questions the IC, in its different facets (HC, RC, and SC) influence on CA with its diminution (Cost, Quality, and Flexibility), the structural equation analysis method is considered. Before starting the analysis, a descriptive statistic of demographical data illustrated at table (3).

Table 3. Descriptive statistics of demographic data

	Number	Percentage
Gender		
Male	240	68.2%
Female	112	31.8
Total	352	100%
Age		
22-29	117	33.2%
30-37	92	26.1%
38-45	59	16.8%
46-53	48	13.6%
54-60	36	10.2%
Total	352	100%
Educational Level		
Bachelor	152	43.2%
Master	176	50%
Doctoral	24	6.8%
Total	352	100%
Years of Experience		
Less than 1	24	6.8%
1-3	48	13.6%
4-7	103	29.3%
8-15	153	43.5%
More than 15	24	6.8%
Total	352	100%
Current position level		
Low level	163	46.3%
Middle level	165	46.9%
Top level	24	6.8%
Total	352	100%

5.1 ***Stage 1: Exploratory Factor Analysis (EFA):***

The EFA aims to verify the dimensionality and reliability of the constructs that making up the research model. The relevance of these analysis largely depends on the quality of the scales used. Thus, upstream of this phase of checking internal validity, studies based on questionnaires must

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guarantee the content validity of the scales selected for the study. Indeed, content validity makes it possible to guarantee that the questionnaire created to measure a phenomenon captures the different aspects of the object studied. All items of the instrument should provide a high degree of representation of this object of study.

For some authors, checking the validity of content can be a complex task since the diversity of theoretical perspectives and conceptual controversies around the topics covered can lead to divergences and confusions in the interpretation of meaning and information. conveyed in measurement scales. A pilot study of 30 participants was conducted as a recourse to verify the validity of content. It is therefore for this purpose that we have had recourse to pilot study with mangers of different levels, to whom we have asked to assess the degree of understanding of the selected items and their adaptation to the context of the study and the target population.

5.1.1 Reliability: It is a measurement evaluation within a construct that tests consistently at each attempt, the degree to which a respondent will answer the same questions in the same way (Straus et al. 2004). These clear answers form a cluster, which means that it is possible to research items or measurements of a specific construct together meaningfully. One of the methods to measure reliability is measured using the Cronbach alpha coefficient. In this analysis, the reliability coefficients for each build were stated in the range of 0.723 to 0.805, (Table 5) matching the minimum cut-off value (Sekaran, 2003), which shows the consistency of the instrument.

5.1.2 The validity of measurement scales: The exploratory phase allows to evaluate the qualities and the validity of the measuring instruments. The assessment of the compliance of these scales with the statistical criteria is done using indicators, the definitions and significance thresholds of which we present in the following paragraphs.

The exploratory analysis of the data resulting from this survey is carried out by using an extraction in main axes. The first criterion that the researcher must assess during this phase is the Kaiser-Meyer-Oklin test (KMO). This is an index that allows us to judge the degree of inter-correlation between items of the same construct. When it is between 0.7 and 1, the factorizable nature of the data is recognized (Igalens & Roussel, 1998; Evrard et al., 2003). Subsequently, it is the quality of the items that is judged through their commonalities and their factor contributions. These

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criteria make it possible to purify the scales by removing the items that do not help to explain the construct. According to Hair et al. (2006), the factor contribution must be equal to 0.4 for the item to be retained. The items that meet this requirement help define the axis or axes corresponding to the dimensions of the construct in question. The axes which have an eigenvalue greater than 1 are used to define the dimensions of the scales and to provide information on the part of the variance explained by the selected items.

5.1.3 The results of the EFA: It is common to recognize the importance of the size of the study sample to ensure the quality of analysis performed by structural equation methods (Roussel et al., 2002; Igalens & Roussel, 1998; Hair et al., 2006). Therefore, to provide more robustness to these initial results, exploratory analysis is carried out on the samples that are the largest in terms of size (n = 352). Use SPSS 21 software for data processing.

The KMO test performed on the data is 0.737. Above the critical threshold of 0.7, it allows a factor analysis. It is thus a factorial analysis in principal axes which is carried out. By observing the items of the scale, it has been noticed that one item from HC construct, one item from RC construct, one item from SC construct, and lastly one item from cost construct, all of them have a factorial contribution lower than the critical threshold of 0.4. Therefore, it has been removed and repeat the analysis which reveals a factor whose eigenvalue higher than 1 and explains 64% of the total variance that is greater than satisfactory threshold (according to Hair et al., 2006). The summary of the results from this phase in (Table 4). 23 items are therefore retained. The researcher then performs the calculation of the Cronbach's alpha to assess each scale reliability. These coefficients are between 0.765 and 0.805 exceeds the critical threshold of 0.7. These preliminary results will subsequently be supported by a Confirmatory Factor Analysis (CFA).

Table 4. EFA results

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construct	Items	Mean	S.D.	Com.	F.C.
HC	Our employees are highly skilled and talented	3.27	1.30	0.544	0.73
	Our employees are widely considered one of the best in our industry	2.72	1.07	0.702	0.83
	Our employees have enough knowledge and skill to finish the job.	2.80	1.34	0.750	0.86
	Employees generally use new idea and knowledge to develop a solution	2.40	1.54	0.546	0.72
Cronbach Alpha			0.788		
RC	Our employees share information with others and learn from others within their team and department	3.13	1.28	0.746	0.85
	Our employees interact and exchange ideas with cross-functional departments and divisions.	3.16	1.40	0.633	0.78
	Our employees partner with customers, vendors, and other alliance partners to develop solutions.	3.18	1.36	0.742	0.85
	Our employees apply knowledge from one area of the organization to the problem and opportunities in another part of the organization.	3.16	1.44	0.367	0.60
Cronbach Alpha			0.779		
SC	Our organization uses white paper, case studies, patents as a way to store knowledge.	2.55	1.39	0.645	0.79
	Much of our organization's knowledge is contained in manuals and databases.	2.74	1.12	0.676	0.81
	Our organization has an enterprise information portal having easy access to various information sources.	2.31	1.14	0.584	0.75
	Our organization embeds much of its knowledge and information in structures, systems, and processes.	2.56	1.21	0.625	0.78
Cronbach Alpha			0.796		
Q	Our solutions are very reliable and stable	3.46	1.09	0.694	0.82
	The defect injection rate is below the industry average.	3.07	0.99	0.772	0.87
	Our acceptance defects density is very low	2.30	0.96	0.515	0.66
Cronbach Alpha			0.723		
		2.95	1.21	0.512	0.69

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C	Our solutions are cost-effective The cost of services is one of the lowest in the industry	2.78	1.28	0.721	0.84
	The cost of the services is appropriate to the service quality and delivery.	3.05	1.25	0.663	0.80
	The cost management in our organization is highly effective	2.28	1.19	0.647	0.80
Cronbach Alpha			0.805		
F	Our organization offer a flexible solution to customers	3.05	1.23	0.644	0.78
	Our organization deal with market change in a flexible manner	3.03	1.09	0.735	0.83
	Our organization offer a variety of services suitable for all customers	3.48	1.05	0.619	0.78
Cronbach Alpha			0.734		
KMO			0.737		

5.2 ***Stage 2: Confirmatory Factor Analyses (CFA):***

CFA is concerned as an extension of EFA, with both the reliability and validity of the measurements, with latent structure of the data and makes it possible to explain the correlations observed between the variables. However, this stage of data analysis is at a more advanced stage in the process of testing the theoretical research model (Hair et al., 2006). It makes it conceivable to verify the measurement model in respect of convergent and discriminant validity. For Roussel et al. (2002), CFA should ultimately make it possible to compare a measurement model, whose adjustment qualities will be ensured, with a theoretical model associating the latent variables with their indicators. To do this, the researcher's concern must focus on verifying the reliability and validity of each construct. It should then be interested in the degree of the measurement model fit. It is these aspects that the researcher develops by first presenting the statistical indices used and then by synthesizing the results relating to the constructs of the study.

5.2.1 Criteria for interpretation of results: Anderson & Gerbing (1988) suggest testing the variables reliability and validity before testing the links between the variables in the model. Indeed, it would be futile to test a model whose variables are based on low quality measurements. Different

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statistical parameters can help the researcher to judge the quality of the measurements. These are Jöreskog's rho and convergent and discriminant validity indices. Internal reliability, convergent validity and discriminant validity. During CFA, the internal consistency of a construct is assessed by calculating Jöreskog's rho. This coefficient like Cronbach's alpha. However, it differs from this one because it integrates the error terms in calculation and turns out to be insensitive to the number of items used.

According to Roussel et al. (2002), "convergent validity corresponds to the ability of a measure to provide results close to those of other measures of the same trait (latent variable or main factor); in contrast, discriminant validity is its ability to provide different results from measurements of other traits". It is customary to consider that convergent validity determines to what extent the different items measuring the same construct are convergent. Thus, it is verified when the different items of the same construct are strongly correlated. However, Fornell & Larcker (1981) proposed another approach to convergent validity, which consists in ensuring the mean variance extracted by each construct is greater than 0.5. In (Table 5) for the dimensions of IC, Jöreskog's rhos significantly exceed the threshold of 0.7 and the convergent validity is above the threshold of 0.5. On the other hand, CA with its dimensional also exhibit the satisfactory level of validity > 0.5 and reliability > 0.7.

Table 5. Convergent and Discriminant Validity

Construct	CR	AVE	HC	RC	SC	Q	C	F
HC	0.806	0.514	**0.717**					
RC	0.797	0.508	0.032	**0.713**				
SC	0.800	0.500	0.010	0.102	**0.707**			
Q	0.748	0.509	0.074	-0.086	0.041	**0.713**		
C	0.809	0.516	-0.104	-0.061	0.105	0.165	**0.719**	
F	0.747	0.506	-0.006	0.135	-0.077	-0.202	-0.168	**0.711**

5.2.3 Adjustments indices: The fit indices are the criteria by which the qualities of measurement models can be assessed and compared to the theoretical model (Roussel et al., 2002; Roussel & Wacheux, 2005). A very large panoply of indices is available to the scientific community

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to help researchers choose the best measurement model. Roussel et al. (2002) provide a summary table of the adjustment indices that most commonly used in research using Structural Equation Modeling (SEM). The researcher also specifies the critical significance thresholds of these indices. Three categories are distinguished: absolute indices, incremental indices and parsimony indices.

There are many indices for evaluating the fit degree of a model. They cannot be taken into account simultaneously in a study. The researcher selects the indices that help him to appreciate the models tested. Indeed, all of them have advantages and disadvantages, but it is often recommended to make a selection which makes it possible to have a combination of the three types of indices (Roussel et al., 2002). In this study, researcher use the normalized χ2, the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI) and the Non normed Fit Index (NNFI). These indices are considered to be the most stable, the most insensitive to model complexity and sample size, and the most robust from a statistical point of view (Hu & Bentler, 1999; Barrett, 2007; Kline, 2011).

To test the overall effect of the model, a CFA was conducted. based on the CFA results, the model overall fit was assessed using AMOS 25. The assessment of the model overall fit is shown in Table 6. All of these indicate exposes an adequate level of fit.

Table 6. model Indices fit

Fit indices	Estimates	Acceptable Level
Chi-square	197.66	
d.f	194	
P	0.414	> 0.05
CMIN/DF	1.019	< 3.00
(GI)	0.953	≥ 0.90
AGFI	0.939	≥ 0.95
NFI	0.920	≥ 0.95
CFI	0.998	≥ 0.95
RMSEA	0.007	< 0.08
SRMR	0.0402	< 0.08

5.3 ***Stage 3: Testing hypothesis:***

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To test the research hypothesis, simple linear regression used to explore the relationship between variables. Before testing the model, the underlying assumption regarding the regression analysis were preformed to verify whether the data met the statistical assumptions of simple linear regression analysis. These assumptions are: linearity (linear relationship between the dependent variables (DV's) and Independent Variables (IV's)), Errors are independent, Errors are normally distributed, Errors has mean of zero homoscedasticity.

*5.3.1 Linearity:*This assumption for the study of multiple regressions implies linear correlations between independent variables and dependent variables. The researcher adopted a scatter plot that gave a picture of the relationship between the two variables and assessed the correlation between them (Cohen et al, 2003). The points should be distributed along a straight line if the relationship is linear in the population (Cohen et al,2003).

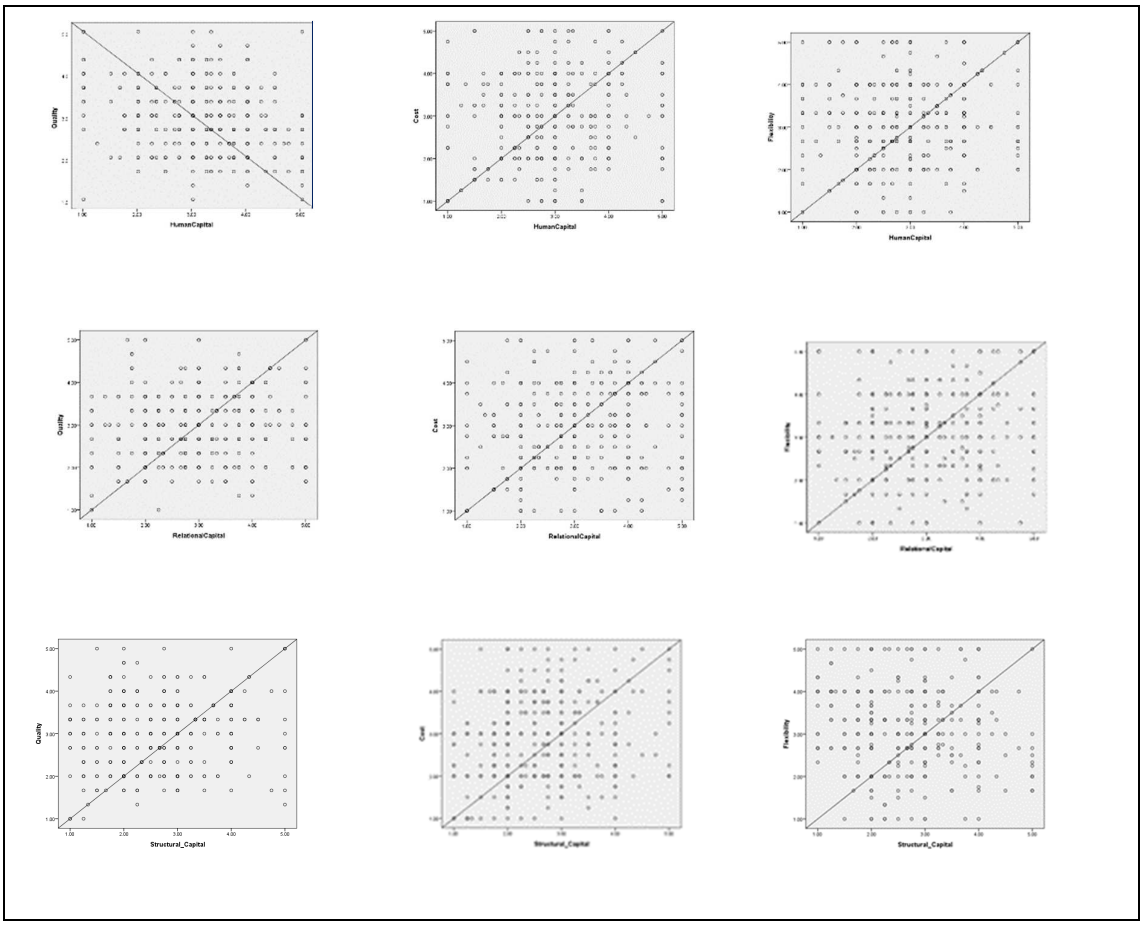

Figure 2: Linearity assumption

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An inspection of the bivariate scatterplots shows most of the points clustered along a straight line, so there were no linearity violations. The linearity check for Pearson correlation was conducted for and the result shown in (Table 7) as follows:

Table 7. Mean and Standard deviation of the variables and correlation matrix

Variables	Mean	S.D.	Correlation					
			HC	RC	SC	Q	C	F
HC	2.78	0.98	------					
RC	2.99	1.02	0.15*	------				
SC	2.65	0.95	0.13*	0.15*	------			
Q	2.94	0.82	0.27*	0.15*	0.17*	-------		
C	2.89	0.98	0.13*	0.19*	0.16*	-0.16*	-------	
F	3.11	0.96	0.11*	0.16*	0.11*	0.07*	-0.07	-------

N=352; M: mean; S.D.: standard deviation; *p < 0.05

5.3.2 Errors are independent: The independent assumption of errors assumes that the errors are un-correlated. This statistic can vary between 0 and 4. The optimum value for this expectation to be fulfilled is close to 2. Values below 1 and above 3 are cause for concern and may invalidate the research. Values between 0 and 2 are positive autocorrelation values, 2 are zero autocorrelation values, and values between 2 and 4 are negative autocorrelation values. From the summary table 8, the value of Durbin Watson lies between 1.783 to 2.007, which implies that this assumption has been fulfilled.

Table 8. Durbin Watson of the independent variables with dependent variables

	Q	C	F
HC	1.788	1.956	2.007
RC	1.783	1.967	1.949
SC	1.788	1.978	1.944

5.3.3 Errors are normally distributed: The P-P plot (figure 3) used to test this assumption, which is a graphical technique for determining whether or not a error is distributed approximately normally. The closer the dots lie to the diagonal line, the more the errors are distributed closer to normal, as the figures blow shows that the expectation was met.

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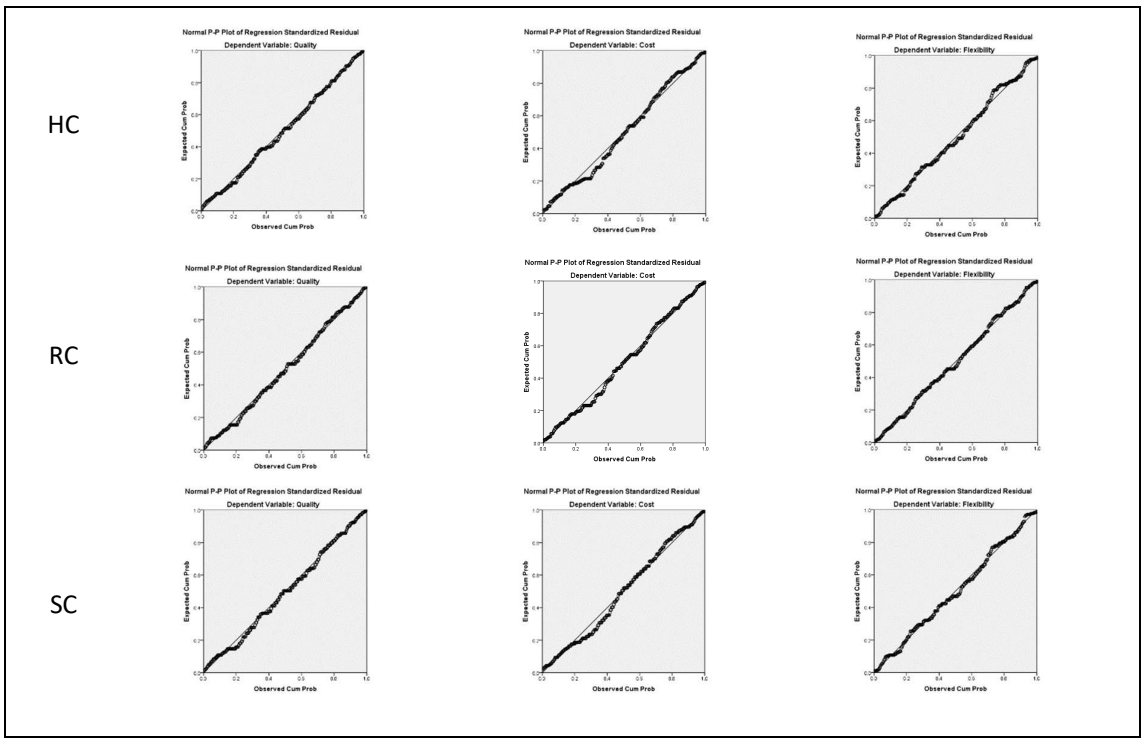
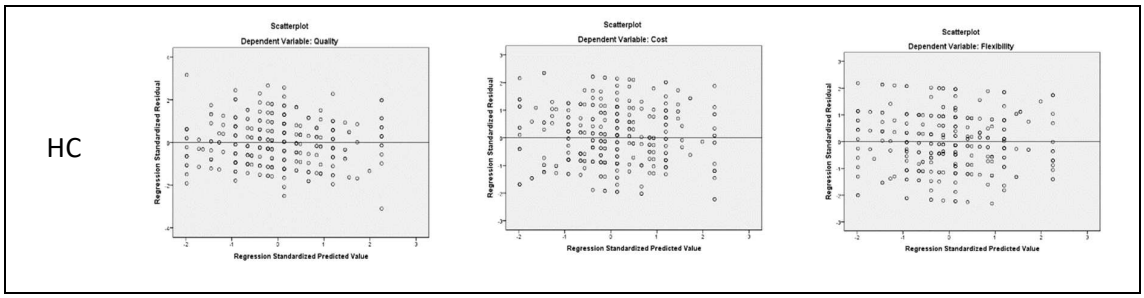


Figure 3: Assumption of error independency

5.3.4 Homoscedasticity: It means continuous variance of the errors, which implies that at all values of the other variable, the variability of scores for one variable is approximately the same. Cohen et al (2003) argues that the conditional variance along the regression line of the errors of one variable is believed to be constant. With bivariate scatterplots, the homoscedasticity assumption was checked and investigated for an oval shape (Green, 1991). A distribution along the line looks constant and as the value of the variable increases, there is no right or left magnitude increase (figure 4).



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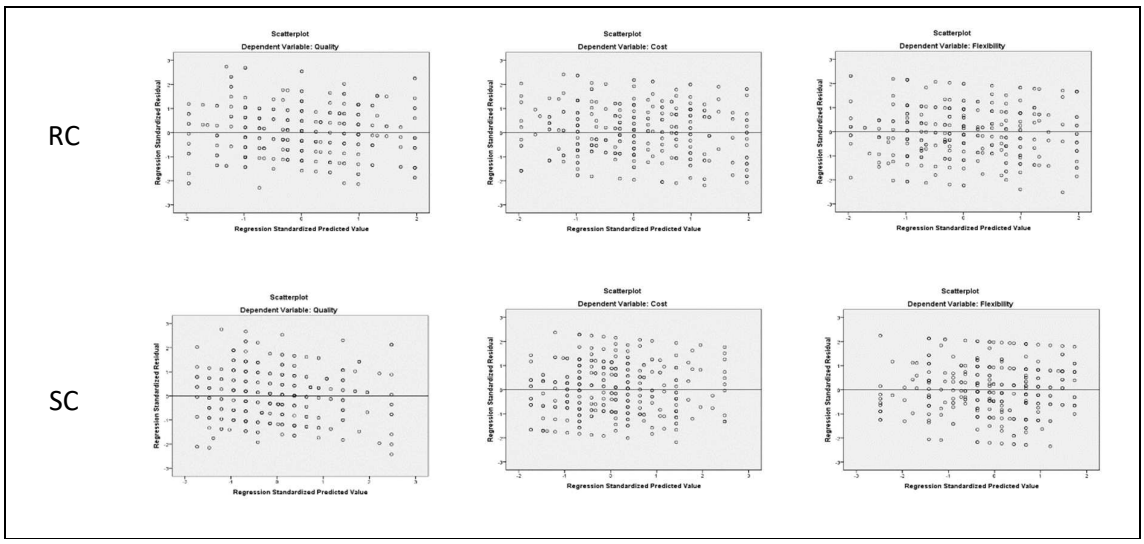

Figure 4: Assumption of error Homoscedasticity

More over the assumption of errors have mean of zero was met as it was appearing at errors mean is zero. Since all assumption of simple liner regression has been met, so we can examine the hypothesis of the research. The results are as follows:

H1: *There is a statistically significant relationship between Human Capital (HC) and Quality (Q) in Saudi financial brokerage companies.*

To examine the relationship between HC and Q, a simple linear regression was conducted. Table 9 reviles it is significant relationship with significant $\beta = 0.234$, $t = 5.253$ and $p = 0.000 < 0.05$. $F(1, 350) = 27.589$, $P < 0.01$, $R = 0.27$ and 7.3% of variability in Q is explained by HC. Therefore, the relationship between HC and Q is Statistically significant.

Table 9. Human Capital and Quality

	Construct	β	t	P	R	R^2
H1	HC	0.234	5.253	0.000	0.27	0.073

H2: *There is a statistically significant relationship between Human Capital (HC) and Flexibility (F) in Saudi financial brokerage companies.*

Table 10 displays the relationship between HC and F. the Coefficient of the relationship is significant $\beta = 0.108$, $t=1.995$ and $p = 0.047 < 0.05$. Moreover $F(1,350) = 3.980$, $P = 0.047 < 0.05$. $R= 0.106$ and

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1.1% of variability in F is explained by HC. Therefore, we can conclude that there is a statistically significant relationship between HC and F.

Table 10. Human Capital and Flexibility

	Construct	β	t	P	R	R^2
H2	HC	0.108	1.995	0.047	0.106	0.011

H3: *There is a statistically significant relationship between Human Capital (HC) Cost (C) in Saudi financial brokerage companies.*

Table 11 shows the relationship between HC and C. the Coefficient of the relationship is significant β = 0.131, t=2.380 and p = 0.018 < 0.05. Moreover F (1,350) = 5.665, P = 0.018 < 0.05. R= - 0.126 and 1.6% of variability in C is explained by HC. Therefore, we can conclude that there is a statistically significant relationship between HC and C.

Table 11. Human Capital and Cost

	Construct	β	t	P	R	R^2
H3	HC	0.131	2.380	0.018	-0.126	0.016

H4: *There is a statistically significant relationship between Structural Capital (SC) and Quality (Q) in Saudi financial brokerage companies.*

Table 12 reviles the relationship between SC and Q. the Coefficient of the relationship is significant β = 0.147, t = 3.242 and p = 0.001 < 0.05. Moreover, F (1,350) =10.510, P = 0.001 < 0.05. R= 0.171 and 2.9 % of variability in Q is explained by SC. Therefore, we can conclude that there is a statistically significant relationship between SC and Q.

Table 12. Structural Capital and Quality

	Construct	β	t	P	R	R^2
H4	SC	0.147	3.242	0.001	0.171	0.029

H5: *There is a statistically significant relationship between Structural Capital (SC) and Flexibility (F) in Saudi financial brokerage companies.*

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Table 13 Displays the relationship between SC and F. the Coefficient of the relationship is significant β = 0.109, t = 2.083 and p = 0.042 < 0.05. Moreover, F (1,350) = 4.155, P = 0.042 < 0.05. R= 0.108 and 1.2 % of variability in F is explained by SC. Therefore, we can conclude that there is a statistically significant relationship between SC and F.

Table 13. Structural Capital and Flexibility

	Construct	β	t	P	R	R^2
H5	Structural Capital	0.109	2.083	0.042	0.108	0.012

H6: *There is a statistically significant relationship between Structural Capital (SC) Cost (C) in Saudi financial brokerage companies.*

Table 14 exhibits the relationship between SC and C. The Coefficient of the relationship is significant β = 0.168, t = 3.079 and p = 0.002 < 0.05. Moreover, F (1,350) = 9.479, P = 0.002 < 0.05. R= 0.162 and 2.6 % of variability in C is explained by SC. Therefore, we can conclude that there is a statistically significant relationship between SC and C.

Table 14. Structural Capital and Cost

	Construct	β	t	P	R	R^2
H6	SC	0.168	3.079	0.002	0.162	0.026

H7: *There is a statistically significant relationship between Relational Capital (RC) and Quality (Q) in Saudi financial brokerage companies.*

Table 15 displays the relationship between RC and Q. The Coefficient of the relationship is significant β = 0.119, t = 2.800 and p = 0.005 < 0.05. Moreover, F (1,350) = 7.838, P = 0.005 < 0.05. R= 0.148 and 2.2 % of variability in Q is explained by RC. Therefore, we can conclude that there is a statistically significant relationship between RC and Q.

Table 15. Relational Capital and Quality

	Construct	β	t	P	R	R^2
H7	RC	0.119	2.800	0.005	0.148	0.022

H8: *There is a statistically significant relationship between Relational Capital (RC) and Flexibility (F) in Saudi financial brokerage companies.*

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Table 16 displays the relationship between RC and F. The Coefficient of the relationship is significant β = 0.154, t = 3.101 and p = 0.002 < 0.05. Moreover, F (1,350) = 9.615, P = 0.002 < 0.05. R = 0.164 and 2.7 % of variability in F is explained by Relational Capital. Therefore, we can conclude that there is a statistically significant relationship between RC and F.

Table 16. Relational Capital and Flexibility

	Construct	β	t	P	R	R^2
H8	RC	0.154	3.101	0.002	0.164	0.027

H9: *There is a statistically significant relationship between Relational Capital (RC) Cost (C) in Saudi financial brokerage companies.*

Table 18 displays the relationship between RC and C. The Coefficient of the relationship is significant β = 0.180, t = 3.554 and p = 0.000 < 0.05. Moreover, F (1,350) =12.630, P = 0.000 < 0.05. R= 0.187 and 3.5 % of variability in C is explained by RC. Therefore, we can conclude that there is a statistically significant relationship between RC and C.

Table 17. Relational Capital and Cost

	Construct	β	t	P	R	R^2
H9	RC	0.180	3.554	0.000	0.187	0.035

6. CONCLUSION

Reviewing the result of this study reveals that a significant relationship between IC in its all dimensions and CA in it's all dimensions. This finding is consistent with earlier finding by (Mulyasari & Murwaningsari, 2019: Yahya et al., 2019: Li & Liu, 2018: Dahash and Al-Dirawib, 2018: Al Assaf, 2019: and Bontis et al., 2000). In this study, the relative importance of all IC dimensions is almost the same. This study contributes to the body of knowledge by studying the impact of IC aspects (human, structural, and relational) in achieving the CA through its specific dimensions (quality, cost, and flexibility). Furthermore, no research had studied this phenomenon in the Kingdom of Saudi Arabia. These may give uniqueness to this study and strive for the researcher to fill the gap.

The study's finding reveals an understanding of IC's importance among the top and middle managerial levels in local financial brokerage services companies. However, some do not link the

fields under study, they may not understand the effect of IC dimensions on CA, but they know that the HC, RC, and SC are crucial factors in today's business environment. However, organizations today should make a better effort to capitalize and utilize the IC through its rules and policies, showing their employees that they are under attention and cares. This would lead employees to improve their skills in these dimensions to get more benefits from the organization.

The dimensions of IC have been studied during this research are all having positive contribution and impact on CA but its impact is little bit weak, which means that there is other factor may have stronger influences on achieving CA. Even with the importance of IC on many dimensions of businesses today and its positive impact on many organizations' success, targeting CA need focuses on other factors might play crucial role in this regard. There are many researches today studying the CA, exploring them would lead to effective ways to increase it especially in contemporary business environment characterized by high level of competitiveness.

7. RECOMMENDATION FOR FUTURE RESEARCH

Examining other factors that may have stronger impact on CA could contribute to solve the CA issues. Additionally, develop the model by adding moderate and \ or mediate variables may lead to modify the strength of the relationship.

REFERENCES

Anderson, J.C. & Gerbing, D.W. 1988. Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, Vol 103(3), 411-423.

Ahangar, R. (2011), The relationship between intellectual capital and financial performance: an empirical investigation in an Iranian company, *African Journal of Business Management*, Vol 5 (1), 88-95.

Asiaei, K., & Jusoh, R. (2015). A multidimensional view of intellectual capital: the impact on organizational performance. *Management decision*, Vol 53,(3), 668-697.

Bakhouche, M. Y. (2019). Intellectual capital as a source of sustainable competitive advantage. *International Journal of Automotive and Mechanical Engineering*, Vol 8(3), 11-16.

Bollen K .. 1989 .Structural equations with latent variables. John Wiley & Sons, New York.

Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management decision*, Vol 36 (2), 63-76.

Bontis, N. (2000), Assessing knowledge assets: a review of the models used to measure intellectual capital, 1-23,

Bontis, N., Keow, W. and Richardson, S. (2000), Intellectual capital and business performance in Malaysian industries, *Journal of Intellectual Capital*, Vol 1(1), 85-100.

Cabrita, M. and Bontis, N. (2008), Intellectual capital and business performance in the Portuguese banking industry, *Int. J. Technology Management*, Vol 43, 1-3, 1-26.

Chen, Y. (2008), The positive effect of green intellectual capital on competitive advantages of firms, *Journal of Business Ethics*, Vol 77 (3), 271-286.

Choudhury, C. (2010), Performance Impact of Intellectual Capital: A Study of Indian it Sector, *International Journal of Business and Management*, Vol 5(9), 72-80.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.). Mahwah, NJ: Erlbaum.

Cronbach, L. J., & Meehl, P. E. (1955). Construct Validity in Psychological Tests. Psychological Bulletin, Vol 52(4), 281.

Curado, C. and Bontis, N. (2007), Managing intellectual capital: the MIC matrix, *International Journal of Knowledge and Learning*, Vol 3(3), 316-328.

Dahash Q. and Al-Dirawib A. (2018) Investment in intellectual capital and achievement of the competitive advantage in hotel sector. *Management Science Letters*, Vol 8(7), 795–804.

Evrard, Y., Pras, B. & Roux, E. 2003. Market: Marketing studies and research. Paris: Dunod, 3rd Edition.

Fornell, C. & Larcker, D.F. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, Vol 48, 39-50.

Forza, C. (2002). Survey Research in Operations Management: A Process-based Perspective. *International Journal of Operations & Production Management*, Vol 22(2), 152-194.

Grant, R.M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, Vol 33(3), 114-135.

Green, J. P., Tonidandel, S., & Cortina, J. M. (2016). Getting Through the Gate Statistical and Methodological Issues Raised in Reviewing Process. *Organizational Research Methods*, 1, 32.

Guilford, J. P. Psychometric methods. (2nd ed.) New York: McGraw-Hill, 1954.

Hair, J., Black, W., Babin, B., Anderson, R. & Tatham, R. 2006. Multivariate Data Analysis, 6th Ed. Upper Saddle River, New Jersey: Pearson Prentice Hall.

Halim, S. (2010), Statistical analysis on the intellectual capital statement, *Journal of Intellectual Capital*, Vol 11 (1), 61-73.

Hernandez, J. and Noruzi, M. (2010), How intellectual capital and learning organization foster competitiveness, *International Journal of Business and Management*, Vol. 5 (4), 183-193.

Hinkin, T. R. (1998). A Brief Tutorial on the Development of Measures for Use in Survey Questionnaires. *Organizational Research Methods*, Vol 1(1), 104-121.

Isaac, R., Herremans, I. and Kline, T. (2010), Intellectual capital management enablers: a structural equation modeling analysis, *Journal of Business Ethics*, Vol 93 (3), 373-391.

Israel, Glenn D. (1992): Sampling the Evidence of Extension Program Impact. Program Evaluation and Organizational Development, IFAS, University of Florida.

Kamath, G. (2007), The intellectual capital performance of Indian banking sector, *Journal of Intellectual Capital*, Vol 8 (1), 96-123.

Kamukama, N., Ahiauzu, A. and Ntayi, J. (2011), Competitive advantage: mediator of intellectual capital and performance, *Journal of Intellectual Capital*, Vol 12 (1), 152-164.

Kavida, V. and Sivakoumar, N. (2009), Intellectual capital: a strategic management perspective, *The IUP Journal of Knowledge Management*, Vol. 7 (5), 55-69.

Kim, T., Yoo, J. and Lee, G. (2011), The HONICAP scale: measuring intellectual capital in the hotel industry, *Service Industries Journal*, Vol 3 (13), 2243-2272.

Krajewski, Judie, Ritzman, Barbara, & Malhotra, Maya (2013). Operation management process and supplychains (10th ed). Pearson Education Limited, Pre Media-Global USA Inc.

Li, Q. and Chang, C. (2010), The customer lifetime value in Taiwanese credit card market, *African Journal of Business Management*, Vol 4 (5), 702-710.

Li, Y. Q., & Liu, C. H. S. (2018). The role of problem identification and intellectual capital in the management of hotels' competitive advantage-an integrated framework. *International Journal of Hospitality Management*, 75, 160-170.

Ma, H. (2004), Toward global competitive advantage − creation, competition, cooperation, and co-option, *Management Decision*, Vol 42 (7), 907-924.

Maditinos, D., Chatzoudes, D. and Tsairidis, C. (2011), The impact of intellectual capital on firms' market value and financial performance, *MIBES Transactions*, Vol 5 (1), 58-72.

Mulyasari, W., & Murwaningsari, E. (2019). Intellectual Capital, Competitive Advantage, Financial Performance and Company Value Among Banking Industries in Indonesia. *Advances in Social Sciences Research Journal*, Vol 6(4), 78 – 89.

Rodrigues, H., Pedro, D. and Carlos, F. (2010), "The influence of human capital on the innovativeness of firms", *International Business & Economics Research Journal*, Vol 9 (9), 53-64.

Rowley, J. (2014). Designing and Using Research Questionnaires. *Management Research Review*, 37(3), 308-330.

Russell, Roberta S., & Taylor, Bernard W. (2011). Operations management creating value along the supply chain (7th ed). New Jersey: John Wiley& Sons, Inc.

Sekaran, U. (2003). Research Method for Business: A Skill-Building Approach. (4th Edition). New York, John Wiley & Sons.

Shih, K., Chang, C. and Lin, B. (2010), "Assessing knowledge creation and intellectual capital in banking industry, *Journal of Intellectual Capital*, Vol 11 (1), 74-89.

Stevenson, William J. (2012). Operations management. New York, NY: McGraw-Hill/Irwin.

Slack, Nigel, Jones, Alistair Brandon, & Johnston, Robert (2013). Operation management (7th ed). London: Pearson Education Limited.

Straub, D., Boudreau, M. C., & Gefen, D. (2004). Validation Guidelines for IS Positivist Research. *The Communications of the Association for Information Systems*, Vol 13(1), 63.

Straus, M.A. (2004). Cross-cultural reliability and validity of the revised conflict tactics scales: A study of university student dating couples in 17 nations: Cross-Cultural Research. *The Journal of Comparative Social Science*, Vol 38, 407-432.

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Tidd, J., Bessant, J. and Pavitt, K. (2005), Managing Innovation: Integrating Technological, Market and Organizational Change, 3rd ed., John Wiley & Sons, Sussex.

Tseng, C. and Goo, Y. (2005), Intellectual capital and corporate value in an emerging economy: empirical study of Taiwanese manufacturers, *R&D Management*, Vol 35 (2), 187-201.

Vautier, S., Roussel, P. & Jmel, S. (2005). Modeling individual differences with factor analysis. In P. Roussel & F. Wacheux (Eds.), Human resources management: *Research methods in human and social sciences,* 277-298.

Wernerfelt, B. (1984). A resource-based view of firm. *Strategic management journal*, 5(2), 17-38.

Wu, Y., Chang, M. and Chen, C. (2008), Promoting innovation through the accumulation of intellectual capital, social capital, and entrepreneurial orientation, *R&D Management*, Vol 38 (3), 265-277.

Yahya, N. A., Arshad, R., Kamaluddin, A., & Rahman, R. A. (2019). Green Intellectual Capital and Firm Competitive Advantage: Evidence from Malaysian Manufacturing Firms. *The Journal of Social Sciences Research*, Vol 5(2), 463-471.

Zeebaree, Mohammed R. Yaseen, &Siron, Rusinah Bt. (2017). The impact of entrepreneurial orientation on competitive advantage moderated by financing support in SMEs. *International Review of Management and Marketing*, Vol 7 (1), 43-52.

Zerenler, M., Hasiloglu, S. and Sezgin, M. (2008), Intellectual capital and innovation performance: empirical evidence in the Turkish automotive supplier, *Journal of Technology Management and Innovation*, Vol 3 (4), 31-44.

Zhou, A. and Fink, D. (2003), The intellectual capital web: a systematic linking of intellectual capital and knowledge management, *Journal of Intellectual Capital*, Vol. 4 No. 1, 34-48.