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The impact of intellectual capital on competitive advantages in several commercial banks in Erbil city

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Abstract: This research paper examines the relationship between intellectual capital and competitive advantage in commercial banks in Erbil. The analysis focuses on three dimensions of intellectual capital: human capital, relational capital and structural capital and their contribution to competitive advantage. A questionnaire was used for this purpose on a sample of 70 officials of the studied banks using the statistical program SPSS. The study highlights the important role of intellectual capital in driving competitive advantage, as the average total intellectual capital was 4.026 and a weak positive correlation (0.260) with competitive advantage. Structural capital shows a significant impact on competitive advantage (p = 0.018), while relational capital does not show a direct contribution (p = 0.856). Regression analysis indicates that human and structural capital positively affect competitive advantage, with coefficients of 0.339 and 0.269 respectively. The results suggest that while intellectual capital is critical, other, less-studied factors also influence competitive advantage. Managers are advised to focus on enhancing human and structural capital, particularly by investing in employee skills, internal systems, and processes, to improve competitive outcomes.

Keywords: Intellectual capital, Competitive advantage.

تاثير الرأس المال الفكري فى المزايا التنافسية في عدد من المصارف التجارية (مصرفRT, مصرف جيهان، مصرف كوردستان) في مدينة اربيل

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المستخلص: تتناول هذه الورقة البحثية العلاقة بين رأس المال الفكري والميزة التنافسية في البنوك في أربيل. ويركز التحليل على ثلاثة أبعاد لرأس المال الفكري: رأس المال البشري ورأس المال العلائقي ورأس المال الهيكلي ومساهمتها في الميزة التنافسية. وتم استخدام استمارة استبيان لهذه الغرض على عينة من موظفي المصارف المبحوثة التي تتكون من ٧٠ موظفا باستخدام البرنامج الإحصائي spss, تسلط الدراسة الضوء على الدور المهم لرأس المال الفكري في دفع الميزة التنافسية، حيث بلغ متوسط رأس المال الفكري الإجمالي ٤,٠٢٦ وارتباط إيجابي ضعيف (٠,٢٦٠) بالميزة التنافسية. ويظهر رأس المال الهيكلي تأثيرًا كبيرًا على الميزة التنافسية (ص =

٠,٠١٨)، في حين لا يظهر رأس المال العلائقي مساهمة مباشرة (ص = ٠,٨٥٦). يشير تحليل الانحدار إلى أن رأس المال البشري والهيكلي يؤثران بشكل إيجابي على الميزة التنافسية، مع معاملات على التوالي ٠,٣٣٩ و٠,٢٦٩. وتشير النتائج إلى أنه في حين أن رأس المال الفكري يشكل أهمية بالغة، فإن عوامل أخرى غير مدروسة تؤثر أيضًا على الميزة التنافسية. ويُنصح المديرون بالتركيز على تعزيز رأس المال البشري والبنيوي، وخاصة من خلال الاستثمار في مهارات الموظفين والأنظمة الداخلية والعمليات، لتحسين النتائج التنافسية.

الكلمات المفتاحية: رأس المال الفكري، الميزة التنافسية.

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Introduction

Today's business sphere strives of the world we live in does not give emphasis in the possession of the tangible assets such as land, natural resources, equipment and so on but rather on the great resources such as intangible asset. Intellectual capital is on the other hand a concept which is concerned with intangible assets and resources owned either by the firm or its human capital which includes an arsenal of ideas, skills and innovations. Some management experts used to define intellectual capital as domains of value creation and value addition towards the organizational success (Barney, 1991).

Additionally, Garvin (1993) highlights organizational learning capability fosters unique employee competencies, promoting various forms of innovation that contribute to competitive advantage and improve business performance, particularly in a knowledge-driven economy (Roos et al., 1997). The competitive advantage can defined as the aspects that an organization's system must own in order to enhance the market demand in the marketplace that organizations are looking to compete in (Krajewski and Ritzman, 1993). In the same direction (Phusavat and Kanchana, 2007) identified the main criteria's of competitive advantages can represent for example at Time, Cost, Quality and Innovation.

1. The Research Problem:

The research problem lies in:

Does the intellectual capital have an impact on achieving the research banks, which are divided into the following: -

Does human capital have an impact on achieving the research banks?

Does financial capital have an impact on achieving the goal of research banks?

Does relational capital (relationships) have an impact on relation to the research banks?

2. Objectives of the Study

A. To assess the influence of intellectual capital on the competitive advantage of several commercial banks in Erbil.
B. To identify the various components of intellectual capital and their role in enhancing the competitive positioning of these banks.
C. To explore the relationship between intellectual capital management and the ability of banks to achieve long-term competitive advantages.
D. To provide recommendations for leveraging intellectual capital to improve bank performance and sustain competitiveness.
E. It provides practical strategies for commercial banks to manage their intellectual capital to optimize its advantages.
F. These objectives aim to bridge the gap in understanding how intellectual capital contributes to the overall success of commercial banks in Erbil

3. The Significance of the Study

This proposal emphasizes the critical role of Intellectual Capital in achieving a competitive advantage within commercial banks. By examining its impact, the study aims to assist banking sector decision-makers in formulating effective plans and strategies that enhance intellectual capital, ultimately leading to a stronger competitive position. This approach also provides banks

with deeper insights into the dimensions of intellectual capital, helping them to maintain or improve their competitive edge. (Arabiyat, A. K. A., & Hasoneh, A. I. 2019)

The study's significance is highlighted through the following points:

- It encourages further research in this vital area by building on the literature review and previous studies.
- It adds substantial value to the field, underscoring its importance in an era of rapid and unpredictable changes.
- It highlights the pivotal role of intellectual capital in driving competitive advantage.

4. Hypotheses of the study:

H_1: There is a significant positive impact and correlation between human capital on competitive advantage.

H_2: There is a significant positive impact and correlation between Relational capital on competitive advantage.

H_3: There is a significant positive impact and correlation between structural capital competitive advantages.

H_4: There is a significant positive impact and correlation between intellectual capital on competitive advantage.

Study model:

The research will study the impact of Intellectual Capital dimensions as independent variable on Competitive Advantage as dependent variable.

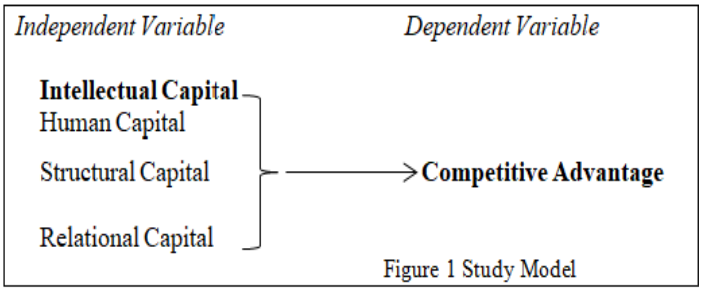

Figure (1): Study Model

Previous studies:

1. Singh and Rao (2016) study titled: "**Examining the Effects of Intellectual Capital on Dynamic Capabilities in Emerging Economy Context: Knowledge Management Processes as a Mediator"** aimed to investigate the effects of intellectual capital on dynamic capabilities and the mediating role of knowledge management processes. The sample was 679 responses from banking industry in India. The findings was that intellectual capital with its three dimensions has significant effect on dynamic capabilities.
2. Luostarinen (2016) study titled: **"The Impact of Intellectual Capital Assets and Knowledge Management Practices on Organizational Performance"** aimed to understand the interaction of intellectual capital assets and knowledge management practices and their impact on organizational performance. The result was that intellectual capital assets and knowledge management practices have the potential to create value both together and separately.
3. (Gunawan and Sanjaya, 2016) study titled: **"The Influence of Intellectual Capital to The Company Value: The Financial Performance as Intervening Variable"** aimed to determine whether the Intellectual Capital will influence the financial performance and company value. The sample was 72 companies. The model that used was the result of value added intellectual coefficient. The results was that intellectual capital has no impact to the financial performance.

4. Melendez (2017) study titled: "**The Impact of Intellectual Capital on Firm's Performance**" The purpose was to investigate the components of intellectual capital and their relation with firm performance among presenting the most employed models of intellectual capital, and examining three already existing studies. This paper includes discussions regarding the previously presented empirical studies and a conclusion and limitations of this thesis.
5. Iqbal and Zaib (2017) study titled: **"Corporate Governance, Intellectual Capital and Financial Performance of Banks listed in Pakistan Stock Exchange"** aimed to examine the effect of Corporate Governance and Intellectual Capital on financial performance in banks listed in Pakistan stock exchange. The sample was dived into two groups Commercial banks and Microfinance & investment banks. The study used a Generalized Least Squared (GLS) model. The results appeared that Corporate Governance has significant impact on intellectual capital in both groups of banks

This study aims to further explore the impact of intellectual capital on competitive advantage, providing valuable insights for both practitioners and researchers. While previous research has primarily focused on the role of intellectual capital in various industries, most studies have concentrated on physical product sectors. Fewer studies have examined its effect on competitive advantage within the services industry. This research will specifically analyze how intellectual capital influences competitive advantage in commercial banks in the Kurdistan Region of Iraq. Unlike previous studies conducted in other countries, this study will take place in Erbil city.

Chapter 1
Literature review

1. Intellectual capital:

One of the novel ideas surfaced between the close of the 20th century and the start of the 21st is the idea of intellectual capital. This idea relates to innovation and mental creation. The excellence mine, value creation, success, and competition approach are today regarded as the true sources of corporate companies' riches. This study reviews some literature on intellectual capital to explore the meaning of intellectual capital, importance, Characteristics and components of Intellectual capital in a way that provides a useful understanding.

There are numerous definitions of intellectual capital. Hamel and Heene (1994) were among the pioneering scholars to describe intellectual capital as a distinctive capability that enables an organization to excel over its competitors by integrating the diverse skills of its individuals, thus enhancing the value offered to customers and serving as a source of competitive advantage. Hunter et al. (2005) defined intellectual capital as an intangible resource with the potential to generate future value. Stewart (1997) referred to it as intellectual knowledge, information, assets, and experience that can be utilized to create wealth. Model and Ghosh (2012) characterized it as intangible assets or business factors that significantly impact a company's performance and overall success, despite not being explicitly listed in financial records.

2. The Importance of Intellectual Capital:

Through the concepts of intellectual capital we find that it has great importance which can be summarized in the following points:

1. Intellectual capital is the strongest weapon and the foundation of the institution, because the intellectual presence is a hidden force to ensure its survival and continuity.
2. Intellectual capital is a treasure buried within the institution that needs to be sought and extracted to exist and practice, for successful investments and high returns to the institution.
3. Intellectual capital is considered a strategic resource for the institution as it helps to generate wealth for itself and individuals and develop it.
4. Intellectual capital contributes to the establishment of smart organizations that require the availability of distinct minds intelligent and capacity

3. The Characteristics of Intellectual Capital: (Elsaid Hany, 2008)

a. Intellectual capital is independent in thought and action.
b. Represents an intangible asset.
c. Intellectual capital interacts more positively in a decentralized administrative environment in decision-making.
d. Intellectual capital represents knowledge that can be converted into profits.
e. Intellectual capital exists in all administrative levels, but to varying degrees.
f. The difficulty of separating intellectual assets from each other.
g. The difficulty of putting some intellectual assets under the control of business organizations.
h. The difficulty of measuring and evaluating many intellectual assets.

4. The Components of Intellectual Capital

Intellectual capital includes three primary interrelated components: (Edvinsson and Malone,1997)

A. Human Capital: Is the knowledge, experiences, capabilities and skills that are related with the employees and which are used through them within the organization (Subramaniam and Youndt, 2005).

B. Structural Capital: Is supportive framework that gives physical form and power to human capital, as well as an organized capacity that includes the tangible system intended for communications or the storage of intellectual materials.

C. Relation Capital: Represents on organizations relations with its external stakeholders and the perceptions.

5. Human capital:

Human capital is a crucial element (Edvinson & Malone, 1997; Sveiby, 1997; Roos & Roos, 1997) and serves as a key driver for the relational and structural components of intellectual capital (Li & Chang, 2010). Leading scholars such as Bontis et al. (2002), Edvinson and Malone (1997), and Isaac et al. (2010) describe human capital as the knowledge held by employees, which does not stay within the organization when they leave at the end of the day. Halim (2010) further explains that human capital includes what employees contribute to value-adding processes, encompassing their professional competence, motivation, and leadership skills.

In addition to linking human capital to the knowledge and skills that individuals possess, most researchers, including Halim (2010), Edvinson and Malone (1997), and Li and Chang (2010), emphasize its connection to people's capabilities and competencies, which are used to generate value. More specifically, human capital is equated with the collection of attitudes, skills, competencies, and abilities that enhance organizational productivity. In essence, human capital reflects how effectively an organization leverages its employees' experience, learning, skills, education, competence, and creativity to create value. Among the various factors influencing human capital, education plays a significant role in improving competencies and capabilities. The quality of formal education, particularly in its early stages, along with experiential learning, contributes to the development of intellectual capital (Akerlof, 1970).

6. Intellectual Capital

The economic notion of value creation and a bundle of assets, initially expounded by economist Kenneth Galbraith in 1969, is the foundation of intellectual capital. It has been extensively covered in the literature, with arguments covering anything from the value of IC in business to how it may increase the effectiveness of the labor and capital markets. Tom Stewart's 1990 article "Brainpower" popularized the phrase "intellectual capital" in the corporate world. The field of intellectual capital has undergone two distinct phases of development. The initial phase concentrated on increasing public knowledge of intellectual capital and its function in establishing

and preserving a long-term competitive advantage. The subsequent phase emphasized intellectual capital from the viewpoint of an organization.

Scholars and industry professionals are researching intellectual capital more and more these days (Petty and Guthrie, 2000). Additionally, the government is investing more money and attention in this field (Tan, Plowman, and Hancock, 2008). There are as many definitions as there are scholars who have studied the advancement of this topic. Even Nevertheless, there isn't yet a widely acknowledged definition of intellectual capital. There is no one definition for intellectual capital and that it is "a fragile construct that has to be continuously supported and held together by a whole array of interrelated elements," is cited by Kaufmann and Schneider (2004).

7. Dimensions of Intellectual Capital

Intellectual Capital is the intangible and tangible material-knowledge, information, data, experience, routines, structures, cultural apparatus, and relationships-that can be put to use by an organization to create wealth. It is the collective term for the intangible assets and consists of three elements of human, relationship and structural capital (Wexler, 2002)

Human Capital

Bennett and Gabriel (1999) state there has been a significant increase in interest in using knowledge management as a strategy for gaining a competitive edge in constantly changing business environments. Successful marketing relies on understanding customers and their preferences, competitors, service providers, products, distribution channels, laws and regulations, and overall management practices. This information exists within an organization’s brainware, supported by technological hardware. Brainware includes the skills, abilities, and experiences of the workforce. McGregor, Tweed, and Pech (2004) explain that human capital involves not just the overall talent of the workforce, but also the specific knowledge, skills, and attributes of individual managers and employees. Individual competence can be classified into four categories based on value and uniqueness: idiosyncratic (low value, high uniqueness), ancillary (low value, low uniqueness), core (high value, high uniqueness), and compulsory (high value, low uniqueness). Core human capital is essential for achieving lasting competitive advantage and requires careful management (Perez & Ordonez de Pablos, 2003).

Organizations depend on people, and their skills and knowledge (which make up human capital) are what create lasting competitive advantage when effectively developed and used (Sharkie, 2003). This advantage is maintained through well-coordinated activities that offer unique value to customers. Employees are key to creating and sharing knowledge (Baker, Barker Thorne & Dutnell, 2000). Knowledge, which includes information, skills, and personal abilities vested in human capital, especially the specific tacit knowledge developed through experience, is a crucial resource for organizations. The ability to acquire and share this knowledge can lead to a sustainable competitive position, regardless of the uniqueness of other resources (Baker et al., 2000 and Sharkie, 2003).

Shani, Sena, and Olin (2003) describe knowledge as a vital resource for an organization’s innovation and competitiveness in today’s global market. Organizations should recognize knowledge as a valuable asset and create effective methods to utilize the collective intelligence and experience of their employees, which forms the basis of core competencies. Innovation, a key factor for sustainability, relies on creating and using new knowledge (Bollinger and Smith, 2001). Darroch and McNaughton (2002) highlight the importance of knowledge management, especially in managing knowledge acquisition and being responsive to it.

Structural Capital

Structural capital of banks represents all the nonhuman storehouses of knowledge including databases, organizational charts, process manuals, strategies, routines and policies (Bontis *et al.*, 2000; Wu and Tsai, 2005). Roos et al. (1998) pointed out that structural capital as “what remains in the bank when employees go home for the night”. According to Cohen and Kaimenakis (2007),

banks do not have their own human capital while structural capital belongs to the bank as a whole and it can be replicated and shared. In the same way Joshi *et al.*, (2010) stated structural capital is a knowledge created by an organization and it cannot be separated from the entity. According to Stewart (2000) and Shih *et al.* (2010) structural capital provides the environment that support individuals to invest their human capital to create and leverage its knowledge.
However, Ramezan, (2011) argued structural capital mainly deals with the system and structure of a bank. Structural capital is very important for the banks to create value added products and to take competitive advantage. Bontis (1998) stated that if a bank has poor structural capital then it will be difficult to reach the full utilization of overall intellectual capital. Ramezan (2011) argued that strong structural capital of an bank lead full utilization of intellectual capital. According to the literature it can concluded that structural capital of banks is consisting of infrastructure, system policies and procedures.

Relational Capital

Relational capital is the knowledge generated from communication between employees and external stakeholders (Al-Khalil et al., 2014; Al Kurdi et al., 2020; AlShehhi et al., 2020; Kurdi et al., 2020). It involves social resources such as relationships, values, and norms, which add value to the organization (Alshurideh, 2019; Almazrouei et al., 2020; Alshurideh et al., 2020).

Innovation

Innovation refers to the organization's ability to develop new products, services, or organizational structures and systems (Damanpour, 1991). It involves creating new processes or products that provide stakeholders with distinguished value and significantly impacts organizational agility. Innovation performance can be measured through various indicators, such as R&D inputs, improved work methods, patent counts, new product announcements, and patent citations (Patky & Pandey, 2020; Boh et al., 2020). Innovation aims to drive radical changes, enhance productivity, and improve processes (O'Sullivan & Dooley, 2008). It encompasses adopting new ideas, programs, or policies and plays a key role in business success, economic growth, and job creation (Abuhashesh et al., 2019a).

Competitive Advantage

Competitive advantage arises from rare, valuable, and unique resources, such as human resources, customer relationships, and systems, providing an organization with a sustainable market position (Kay, 1993). Competitive advantage also refers to the organization's ability to outperform competitors through strategies that are difficult to replicate (Ma, 2004). It is driven by resources that are valuable, rare, non-substitutable, and inimitable, resulting from the integration of unique capabilities. Furthermore, human capital contributes to sustaining Competitive advantage when employees possess rare and valuable characteristics, and organizations can enhance their competitive edge by developing human, relational, and structural capital (Bontis et al., 2000).

Dimensions of Competitive advantage

The organization shall achieve competitive advantage when it possesses resources that are rare, valuable, and imperfectly imitable (Johnson et al., 2016). The achievement of competitive advantage of an organization is attributed to the distinctiveness of its capabilities. Capabilities–in this context- refers to the abilities of the organization to improve its competitive advantage on the long-term (Winter, 2014). The two main components of strategic capabilities are competence and resources (Wheelen et al., 2015). Resources refer to the organizational assets, whereas competence is the effective utilization of the organizational resources. When the organization outperforms its competitors in terms of competency, such a competence is called distinctive competences (Brady and Capell, 2004).

Cost: Organizations achieve competitive advantage by designing, manufacturing, and marketing products or services at lower costs than competitors, leading to higher returns while maintaining quality.
Quality: High-quality products provide organizations with a good reputation, enabling them to differentiate from competitors and charge higher prices. Quality improvements also reduce waste and increase profitability.
Innovation: Innovation is a key driver of Competitive advantage, enabling organizations to develop new products that meet customer needs while improving quality or reducing costs. Continuous commitment to innovation is essential to maintaining Competitive advantage.
Customer Responsiveness: Organizations that are more responsive to customer needs gain an advantage by building brand loyalty and differentiation. Superior responsiveness involves understanding and continuously meeting customer needs, providing the organization with pricing flexibility and a competitive edge.

Intellectual capital and competitive advantage

Organizations possess a variety of resources that influence their overall performance, which can include both tangible and intangible assets, directly or indirectly impacting their competitive advantage (Omerzel & Gulev, 2011). Intellectual capital is a form of intangible or knowledge-based asset within organizations (Choong, 2008; Grimaldi, Cricelli, & Rogo, 2012). These knowledge assets can be classified as either static, representing the knowledge stock within an organization (Sveiby, 1997), or dynamic, reflecting the flow of knowledge as it evolves (Ross et al., 2005). According to Nahapiet and Ghoshal (1998), intellectual capital is created through the combination and exchange of resources, manifesting as either explicit or tacit knowledge within organizations.
Knowledge is recognized as the most critical resource in organizations, serving as a foundation for developing competitive strategies, national and global growth, and profitability (Wong, 2005; Ruzzier, Antoncic, Hisrich, & Konecnik Ruzzier, 2007). Quinn (1992) emphasized the significance of knowledge, arguing that intellectual resources and service capabilities are more important than tangible resources. Thus, intellectual capital serves as a crucial source of knowledge within organizations, and strategic management must not only allocate intellectual capital effectively but also innovate ways to transform intangible assets (Teece, 2007). Organizations that leverage diverse knowledge and human creativity are more likely to innovate and gain a competitive edge (Grimaldi et al., 2012). With the rise of globalization and technological advancements, organizations are compelled to compete in increasingly challenging environments (Hitt, Keats, & De Marie, 1998). To succeed, they must differentiate themselves by performing tasks distinctively. Thus, competitive advantage arises not from the end products and services offered to customers, but from the resources used to create them. This advantage is sustainable only when organizations efficiently and effectively utilize their resources to deliver value to specific market segments (Hunt & Moran, 1995). As a result, organizations must develop strategies that create value from their resources for long-term growth (Porter, 1980; Barney, 1991).
While tangible assets and resources can be substituted, intangible assets, such as organizational culture and product reputation, are far more difficult to replace. Tangible assets do not provide sustainable competitive advantages because they are easily imitated (Hall, 1992). On the other hand, intangible assets, which are rare and non-substitutable, offer lasting value and a sustainable competitive edge for organizations (Grimaldi et al., 2012; Pearson, Pitfield, & Ryley, 2015). Sustainable competitive advantage requires resources that are scarce, unique, non-tradable, and durable (Barney, 1991; Amit & Schoemaker, 1993). Sustainable competitive advantage depends on resources that are valuable, rare, inimitable, and non-substitutable (Henkel, Bider, & Perjons, 2014). Intellectual capital provides the resources and capabilities necessary for achieving sustainable competitive advantage. Without it, organizations cannot secure a competitive position within their industries or markets. Previous research has predominantly focused on the relationship between intellectual capital and business performance (Sharabati et al., 2010; Bontis et al., 2000; Hsu &

Wang, 2012; Seleim & Bontis, 2013; Hsu & Fang, 2009), but there is limited examination of how intellectual capital contributes to competitive advantage. This study posits that a bank's competitive advantage and value creation depend primarily on components of intellectual capital, including human, structural, and relational capital. Bradley (1997) argued intellectual capital, as an integrated whole, plays a more crucial role in economic growth, wealth creation, and competitive advantage than human capital alone. From the resource-based perspective, sustained competitive advantage is derived from intangible, valuable, and inimitable intellectual resources embedded within organizations (Kamukama, 2013).

Chapter 2

Research Methodology

A descriptive and analytical approach was used, which studies the phenomenon in its dimensions and expresses it quantitatively and qualitatively to achieve the objectives of the research and reach specific results.

1. Study population:

The study population consists of all employees of several banks whose number is (70) employees.

2. The study sample:

The sample is considered a part of the study population and was taken to accurately represent the community, and to achieve this, the researcher used the comprehensive survey by including all the items of the statistical community at several commercial banks in Erbil city which are (70) officials.

3. The Statistical Methods Used:

A. Percentages, frequencies, arithmetic mean, relative weight and arrangement for the purposes of knowing the frequency of a variable category in the demographic characteristics of the study sample and analyzing the items of the study variables.
B. Cronbach's Alpha test to find out the stability of the items of the questionnaire.
C. Pearson correlation coefficient to assess the linear relationship between social capital with its dimensions and its role in achieving organizational innovation.
D. Linear Regression test to study the effect of independent variables on the dependent variable and the main hypothesis.
E. (Durbin - Watson) test for the self-correlation of the study variables.

4. Research Methodology

Two cases have deleted because of outliers.

5. Descriptive Statistics Results

First of all, researchers used descriptive statistics which can help in summarizing data in the form of simple quantitative measures such as percentages or means (Blbas at el., 2024).

6. Instrument of Reliability Test

A reliability test was carried out using Cronbach’s alpha, which measures the internal consistency of a construct. The recommended minimum acceptable limit of reliability “alpha” for this measure is 0.60 (Hair et al., 2003 and Blbas, 2019). Cronbach's alpha values were estimated to check the internal consistency of the data after data collection, and Cronbach‘s alpha is a scale tool of reliability (Zhong et al.,2017; Vaske et al., 2017; Taber, 2018, Mishra et al., 2022). More specifically, alpha is a lower bound for true scan reliability.
For an exploratory or experimental study, it is suggested that the reliability be equal to 0.60 or higher (Straub et al., 2004). Hinton, (2014) suggested four cut-off points for reliability, which include excellent reliability (0.90 and above), high reliability (0.70-0.90), moderate reliability (0.50-0.70), and low reliability (0.50 and below) (Hinton, 2014). Although reliability is important to

study, it is not sufficient unless combined with validity. In other words, for a test to be reliable, it must also be valid (Wilson, 2014).

7. Normality Test

The normality tests are supplementary to the graphical assessment of normality. The main tests for the assessment of normality are Kolmogorov-Smirnov test, and Shapiro-Wilk test (Blbas and Kahwachi, 2021). If the number of sample size is 50 or less than 50 we can use Shapiro-Wilk test but Kolmogorov-Smirnov is used when the number of sample size is greater than 50 cases.

8. Correlation and Regression

Regression analysis is a statistical method which is used for undertaking and modeling the functional relationship between a response variable and a set of explanatory or predictor variables (Blbas, 2014). Next, simple linear regression analysis was used to identify each explanatory variables such that Human Capital, Relational Capital, Structural Capital, and Intellectual Capital that predict response variable of Competitive Advantage (Aroian et. al., 2017; Blbas, 2014)

9. Result and discussion

A. Research Hypotheses

H_1: There is a Significant Positive Impact of Human Capital on Competitive Advantage.
H_2: There is a Significant Positive Impact of Relational Capital on Competitive Advantage.
H_3: There is a Significant Positive Impact of Structural Capital on Competitive Advantage.
H_4: There is a Significant Positive Impact of Intellectual Capital on Competitive Advantage.
From a **managerial perspective**, the results of the research hypotheses are critical for understanding how different forms of **intellectual capital** (human, relational, and structural) contribute to the organization's **competitive advantage**. The first H1: Significant Positive Impact of Human Capital on Competitive Advantage. Human capital refers to the skills, knowledge, experience, and capabilities of the workforce. The results confirm that investing in employees' development—through training, education, and knowledge-sharing—has a direct positive effect on the organization's competitive advantage. In additions, managers should prioritize programs that enhance employee skills, such as continuous learning, mentorship, and leadership development. Retaining skilled employees also will be crucial. Offering competitive benefits, career development opportunities, and a positive work environment can help retain valuable talent. Regarding H2: Significant Positive Impact of Relational Capital on Competitive Advantage Relational capital includes the value derived from the organization's relationships with external stakeholders—customers, suppliers, partners, and other key entities. A positive relationship between relational capital and competitive advantage suggests that strong external networks and partnerships enhance the organization's market position. Managers should implement or strengthen CRM strategies to deepen customer loyalty, improve service quality, and ensure long-term client retention. Furthermore, fostering strategic partnerships and building collaborative relationships with suppliers and industry players can give the company a competitive edge. This could also involve co-innovation projects or improving the supply chain. The H3: Significant Positive Impact of Structural Capital on Competitive Advantage Structural capital refers to the organization's internal processes, systems, databases, and intellectual property. The significant positive impact of structural capital on competitive advantage shows that having strong operational systems and well-defined organizational knowledge contributes to superior performance. Therefore, managers should focus on refining business processes, streamlining operations, and implementing technologies that improve efficiency. Investing in knowledge management systems that capture and disseminate institutional knowledge is key. Moreover, structural capital is also linked to innovation. Thus managers should promote a culture of innovation and allocate resources to research and development (R&D) initiatives to keep the organization at the forefront of the industry. Concern the H4: Significant Positive Impact of Intellectual Capital on Competitive Advantage Intellectual

capital is the collective term for human, relational, and structural capital. The significant positive relationship between intellectual capital and competitive advantage suggests that the combined value of these intangible assets is a key driver of long-term success. Thus managers should develop a strategy that integrates human, relational, and structural capital, ensuring that these areas are nurtured in a coordinated way. This includes investing in people (human capital), strengthening relationships (relational capital), and optimizing processes (structural capital). Furthermore, to sustain a competitive advantage, intellectual capital must be continually developed. Managers should treat intellectual capital as an evolving asset, requiring continuous investment in training, relationship-building, and process improvement to maintain relevance in a competitive environment. Overall Managerial Implications: These findings underscore the importance of intellectual capital as a strategic asset for maintaining and enhancing competitive advantage. Managers should ensure that resources are allocated not just to traditional physical assets, but also to human, relational, and structural assets. Besides, each type of intellectual capital plays a unique role in strengthening competitive advantage. Managers should align intellectual capital initiatives with the organization's broader strategic goals, ensuring that all departments contribute to building a strong competitive position. By focusing on all aspects of intellectual capital, managers can create a sustainable, long-term competitive advantage that differentiates the organization from its competitors.

Table (1): Descriptive Statistics for Demographic Characteristics

		N	%
Gender	Male	21	30.0%
	Female	49	70.0%
Age	25-30	26	37.1%
	31-40	35	50.0%
	41-50	9	12.9%
	51+	0	0.0%
Education	High school	6	8.6%
	Diploma	9	12.9%
	Bachelor	52	74.3%
	Master	3	4.3%
Major	Accounting	34	48.6%
	Computer science	12	17.1%
	Finance	12	17.1%
	Business Administration	12	17.1%
Experiance1	1-5 years	17	24.3%
	6-10 years	35	50.0%
	11 years and more	18	25.7%
Training	One training course	15	21.4%
	Two training course	55	78.6%

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table1 shows the percentage of female (70%) is higher than the percentage of male (30%) since most of them are aged between 31 and 40 years (50%). The majority of participants in this study have bachelor degree (74.3%) followed by diploma (12.9%), high school (8.6%), and master (4.3%) respectively since the major of most of them are accounting (48.6%). Most experience of the most participants in this study are between 6 and 10 years (50%) followed by 11 years and more (25.7%), and 1-5 years (24.3%) respectively while the majority of them participated in two training course (78.6%).

Table (2): Descriptive Statistics for independent variable (Intellectual Capital)

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean	Std. Deviation
	N	%	N	%	N	%	N	%	N	%		
Section1_1	3	4.3%	0	0.0%	6	8.6%	40	57.1%	21	30.0%	4.086	0.880
Section1_2	3	4.3%	0	0.0%	9	12.9%	49	70.0%	9	12.9%	3.871	0.797
Section1_3	3	4.3%	6	8.6%	14	20.0%	44	62.9%	3	4.3%	3.543	0.879
Section1_4	3	4.3%	0	0.0%	17	24.3%	38	54.3%	12	17.1%	3.800	0.878
Section1_5	3	4.3%	0	0.0%	15	21.4%	47	67.1%	5	7.1%	3.729	0.779
Section1_6	3	4.3%	0	0.0%	15	21.4%	40	57.1%	12	17.1%	3.829	0.868
Section1_7	0	0.0%	0	0.0%	11	15.7%	50	71.4%	9	12.9%	3.971	0.538
Section1_8	0	0.0%	6	8.6%	14	20.0%	38	54.3%	12	17.1%	3.800	0.827
Section1_9	0	0.0%	3	4.3%	17	24.3%	39	55.7%	11	15.7%	3.829	0.742
Section1_10	0	0.0%	3	4.3%	6	8.6%	47	67.1%	14	20.0%	4.029	0.680
Section1_11	0	0.0%	3	4.3%	12	17.1%	41	58.6%	14	20.0%	3.943	0.740
Section1_12	0	0.0%	6	8.6%	9	12.9%	31	44.3%	24	34.3%	4.043	0.908
Section1_13	0	0.0%	3	4.3%	18	25.7%	29	41.4%	20	28.6%	3.943	0.849
Human Capital											3.878	0.544
Section2_1	0	0.0%	0	0.0%	5	7.1%	35	50.0%	30	42.9%	4.357	0.615
Section2_2	0	0.0%	0	0.0%	5	7.1%	30	42.9%	35	50.0%	4.429	0.627
Section2_3	0	0.0%	0	0.0%	2	2.9%	45	64.3%	23	32.9%	4.300	0.521
Section2_4	0	0.0%	0	0.0%	8	11.4%	53	75.7%	9	12.9%	4.014	0.496
Section2_5	0	0.0%	0	0.0%	8	11.4%	38	54.3%	24	34.3%	4.229	0.641
Section2_6	0	0.0%	0	0.0%	3	4.3%	43	61.4%	24	34.3%	4.300	0.548
Section2_7	0	0.0%	0	0.0%	0	0.0%	41	58.6%	29	41.4%	4.414	0.496
Relational Capital											4.284	0.355
Section3_1	0	0.0%	3	4.3%	14	20.0%	17	24.3%	36	51.4%	4.229	0.920
Section3_2	3	4.3%	2	2.9%	12	17.1%	27	38.6%	26	37.1%	4.014	1.028
Section3_3	3	4.3%	4	5.7%	21	30.0%	18	25.7%	24	34.3%	3.800	1.111
Section3_4	5	7.1%	2	2.9%	12	17.1%	21	30.0%	30	42.9%	3.986	1.173
Section3_5	0	0.0%	4	5.7%	18	25.7%	30	42.9%	18	25.7%	3.886	0.860
Section3_6	3	4.3%	2	2.9%	9	12.9%	35	50.0%	21	30.0%	3.986	0.970
Section3_7	3	4.3%	4	5.7%	21	30.0%	21	30.0%	21	30.0%	3.757	1.083
Section3_8	3	4.3%	2	2.9%	26	37.1%	18	25.7%	21	30.0%	3.743	1.059
Section3_9	3	4.3%	2	2.9%	12	17.1%	26	37.1%	27	38.6%	4.029	1.035
Section3_10	0	0.0%	5	7.1%	9	12.9%	23	32.9%	33	47.1%	4.200	0.926
Section3_11	3	4.3%	2	2.9%	6	8.6%	23	32.9%	36	51.4%	4.243	1.028
Section3_12	3	4.3%	2	2.9%	6	8.6%	32	45.7%	27	38.6%	4.114	0.986
Section3_13	0	0.0%	2	2.9%	15	21.4%	20	28.6%	33	47.1%	4.200	0.878
Section3_14	0	0.0%	2	2.9%	9	12.9%	35	50.0%	24	34.3%	4.157	0.754
Section3_15	5	7.1%	0	0.0%	5	7.1%	33	47.1%	27	38.6%	4.100	1.052
Section3_16	3	4.3%	5	7.1%	12	17.1%	17	24.3%	33	47.1%	4.029	1.154
Structural Capital											4.029	0.733
Intellectual Capital											4.026	0.481

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 2 shows the descriptive statistics for independent variable of Intellectual Capital, the result of question 2 in section 1 has the highest mean of Human Capital (4.086) while the overall mean of this factor is (3.878) with standard deviation (0.544). Then the result of question 2 in Section2 has the highest mean of Relational Capital (4.429) while the overall mean of this factor is (4.284) with standard deviation (0.355). Next the result of question 11 in Section 3 has the highest mean of Structural Capital (4.243) while the overall mean of this factor is (4.029) with standard deviation (0.733). Finally, the overall mean of independent variable of Intellectual Capital is (4.026) with standard deviation (0.481).

Human capital relates to the skills, knowledge, and abilities of employees. The scores here reflect a generally positive perception, with a mean of 3.878 across various statements. However, some sections show lower levels of agreement, suggesting room for improvement in areas of employee development. Although there is a high agreement on the importance of human capital, variation in responses (e.g., Section 1_3 with a mean of 3.543) indicates that some employees feel less supported or skilled in certain areas. Managers should invest more in training and upskilling employees, particularly in sections that show weaker perceptions. Besides,sections with high mean scores (e.g., Section 1_1 at 4.086) suggest that employees feel positively about their roles and contributions. This is a strength that managers can leverage to further engage and motivate their workforce.

While relational capital, which refers to the relationships the organization has with customers, suppliers, and other stakeholders, is rated highly, with the highest mean (4.284) and the lowest standard deviation (0.355). This suggests strong and consistent positive perceptions regarding relational capital. The high levels of agreement suggest that the organization has established strong relationships with external partners. Managers should continue nurturing these relationships as they are a key driver of competitive advantage, particularly in maintaining customer loyalty and collaborative partnerships. Moreover, with strong relational capital, the organization is well-positioned to leverage partnerships for innovation and market expansion. Managers should focus on strategic partnerships and expanding networks to further enhance competitive advantage.

Structural capital refers to the non-human storehouses of knowledge, such as processes, databases, and intellectual property. With a mean of 4.029, the table indicates a solid structure, though there is more variability in responses compared to relational capital, as seen in the standard deviation of 0.733. The variability in responses suggests that while some employees feel the organization's systems and processes are effective, others may perceive gaps in knowledge management (e.g., Section 3_7 with a mean of 3.757). Managers should focus on ensuring that structural capital is consistently utilized across the organization by improving internal systems and making knowledge more accessible to all employees. Furthermore, strong structural capital is key to supporting innovation and operational efficiency. Sections with higher mean scores (e.g., Section 3_10 at 4.200) show that employees generally agree that the company’s processes and structures support their work. Managers should focus on continuously improving these structures to sustain long-term innovation.

The overall score for intellectual capital, combining human, relational, and structural capital, is relatively high (4.026), indicating that employees perceive the organization's intellectual resources positively. The lower standard deviation (0.481) suggests consistency in responses across the workforce, signaling a general alignment in how intellectual capital is understood and applied. The organization’s strong relational and structural capital, along with a solid base of human capital, positions it well for competitive advantage. Managers should focus on sustaining this balance by continuously improving human capital (through training and development), strengthening relational capital (by deepening partnerships), and enhancing structural capital (by refining internal systems and processes). While the overall perception is positive, areas with slightly lower mean scores in human capital and structural capital indicate where targeted improvements can be made. Managers can prioritize initiatives that improve knowledge-sharing platforms, encourage innovation, and enhance employee skills to bolster the company’s intellectual capital. In additions, given some

variability in the perception of human capital, managers should develop targeted training programs to address gaps in knowledge and skills, ensuring employees feel equipped to contribute to competitive advantage. The high relational capital scores suggest that strong external relationships are a key asset. Managers should focus on deepening partnerships and exploring new collaborative opportunities to drive innovation and growth. Moreover, the variability in structural capital indicates the need for better knowledge-sharing systems and efficient internal processes. Investing in technology and platforms that allow employees to access and use organizational knowledge can enhance overall competitiveness. In conclusion, the table provides valuable insights for managers to assess the strengths and areas for improvement in their organization's intellectual capital. By focusing on training, partnerships, and internal processes, managers can further enhance the company's competitive advantage.

Table (3): Descriptive Statistics for independent variable (Intellectual Capital)

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean	Std. Deviation
	N	%	N	%	N	%	N	%	N	%		
Section1_1	3	4.3%	6	8.6%	4	5.7%	14	20.0%	43	61.4%	4.257	1.163
Section1_2	0	0.0%	3	4.3%	15	21.4%	39	55.7%	13	18.6%	3.886	0.753
Section1_3	0	0.0%	3	4.3%	6	8.6%	49	70.0%	12	17.1%	4.000	0.659
Cost Strategy											4.048	0.725
Section2_1	3	4.3%	3	4.3%	21	30.0%	24	34.3%	19	27.1%	3.757	1.042
Section2_2	3	4.3%	0	0.0%	33	47.1%	29	41.4%	5	7.1%	3.471	0.812
Section2_3	3	4.3%	3	4.3%	24	34.3%	32	45.7%	8	11.4%	3.557	0.911
Focus Strategy											3.595	0.720
Section3_1	9	12.9%	3	4.3%	25	35.7%	17	24.3%	16	22.9%	3.400	1.256
Section3_2	3	4.3%	15	21.4%	21	30.0%	22	31.4%	9	12.9%	3.271	1.076
Section3_3	20	28.6%	6	8.6%	18	25.7%	22	31.4%	4	5.7%	2.771	1.321
Excellence Strategy											3.148	1.026
Competitive Advantage											3.597	0.696

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 3 shows the descriptive statistics for dependent variable of Competitive Advantage, the result of question 1 in section 1 has the highest mean of Cost Strategy (4.257) while the overall mean of this factor is (4.048) with standard deviation (0.725). Then the result of question 1 in Section2 has the highest mean of Focus Strategy (3.757) while the overall mean of this factor is (3.595) with standard deviation (0.720). Next the result of question 1 in Section 3 has the highest mean of Excellence Strategy (3.400) while the overall mean of this factor is (3.148) with standard deviation (0.1.026). Finally, the overall mean of dependent variable of Competitive Advantage is (3.597) with standard deviation (0.696). This table provides insights into the perceptions of employees regarding three key competitive strategies—**Cost Strategy, Focus Strategy, and Excellence Strategy**—and how these influence the organization's overall **Competitive Advantage**. The analysis of mean and standard deviation values helps managers understand which strategies are perceived as strengths and which areas need improvement to enhance competitive advantage. The cost strategy is rated relatively high with a mean of 4.048, indicating that employees perceive the organization as effectively managing costs. Sections like 1_1 (Mean: 4.257) suggest a strong agreement with cost-efficiency measures. Besides, employees recognize that the organization excels in managing costs efficiently, which is vital for maintaining competitive pricing in the market. Managers should continue leveraging cost advantages to strengthen market position. While overall scores are high,

Section 1_2 (Mean: 3.886) shows slightly lower agreement, indicating that some employees see room for improvement in balancing cost control with operational effectiveness. Managers should ensure cost-cutting does not hinder productivity.

The focus strategy, which emphasizes targeting specific market niches, has a moderate mean score of 3.595. This suggests that while there is some alignment with this strategy, there may be inconsistencies in its execution or employee understanding. The mixed responses, especially in Section 2_2 (Mean: 3.471), highlight potential challenges in executing the focus strategy. Managers may need to clarify the target markets and align operational activities to ensure consistency in pursuing niche markets. Given the varied responses, managers should engage employees to better communicate the purpose and goals of the focus strategy, ensuring they understand its importance in delivering tailored services to specific customer segments.

The excellence strategy, which focuses on offering superior products or services, has the lowest mean score (3.148) with high variability (standard deviation of 1.026). This suggests that employees do not perceive the organization as particularly strong in this area. The lower scores, particularly in Section 3_3 (Mean: 2.771), reflect that employees may feel the organization is not consistently delivering high-quality or differentiated products. This is a critical area for managers to address, especially if the company intends to compete on excellence. Additionally, managers should focus on improving product quality and customer service, reinforcing a culture of excellence. Investing in innovation, product development, and customer feedback mechanisms can help improve perceptions and strengthen the company's excellence strategy.

The overall competitive advantage score (Mean: 3.597) indicates a moderate level of perceived competitiveness, with room for improvement. The slightly above-average score implies that while the company has some strengths, particularly in cost management, other strategies may not be fully optimized. To enhance competitive advantage, managers must focus on improving the weaker strategies, such as excellence and focus, while maintaining strengths in cost control. A balanced strategy that incorporates cost leadership, niche targeting, and excellence can provide a more comprehensive competitive advantage. Managers should also ensure that all employees understand the company's strategic priorities and how their roles contribute to achieving competitive advantage. Clear communication and consistent execution of these strategies are essential for long-term success.

With a strong foundation in cost strategy, managers should maintain focus on cost control while ensuring it does not compromise product quality or employee satisfaction Besides, to better leverage the focus strategy, managers need to ensure alignment between the company's operational activities and its niche markets. This may involve more targeted training for employees on how to serve specific customer segments. Furthermore, the low scores in the excellence strategy indicate a need for improvements in quality, innovation, and customer satisfaction. Managers should prioritize investments in product development and service enhancements to boost this area. Finally, a well-rounded approach that strengthens all three strategies—cost, focus, and excellence—will enable the organization to build a more sustainable competitive advantage. Managers should aim to integrate these strategies in a cohesive manner, ensuring that strengths are maintained while addressing weaknesses. In conclusion, while the organization is seen as strong in managing costs, its focus and excellence strategies require more attention to fully leverage its competitive potential.

Table (4): Normality test for dependent variable of Competitive Advantage

Kolmogorov-Smirnov	
Statistic	p-value
0.101	0.073

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 4 shows the result of normality test using Kolmogorov-Smirnov, the dependent variable of our research is normally distribute using Kolmogorov-Smirnov because its p-value (0.073) is higher than the significant level of α = 0.05. Therefore, the results of the **Kolmogorov-Smirnov test** confirm that the competitive advantage data are normally distributed, ensuring that the statistical analysis supporting the research findings is reliable. Managers can thus trust the research's recommendations and apply them to their decision-making processes.

Table (5): Reliability of measurements for all variables

Constructs	Number of items	Cronbach's Alpha
Human Capital	13	0.902
Relational Capital	7	0.789
Structural Capital	16	0.944
Intellectual Capital	36	0.937
Cost Strategy	3	0.749
Focus Strategy	3	0.721
Excellence Strategy	3	0.798
Competitive Advantage	9	0.860
All independent. and dependent variables	45	0.927

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 5 shows the values of the Cronbach's coefficient estimated for testing the internal consistency of the measurement. The result for Cronbach's alpha is (0.902) for Human Capital, (0.789) for Relational Capital, (0.944) for Structural Capital, (0.937) for Intellectual Capital,
(0.749) for Cost Strategy, (0.721) for Focus Strategy, (0.798) for Excellence Strategy, (0.860) for Competitive Advantage, and (0.927) for all independent and dependent variables. The table (5) represents that all the constructs have passed the reliability test where all α–values have exceeded the recommended minimum value of Cronbach's alpha (Blbas, 2019). Thus, the **reliability** of the constructs in this study is high, suggesting that managers can confidently rely on the results to inform strategic decisions around **intellectual capital** and **competitive strategies**. This will support informed decisions that enhance the organization's **competitive advantage** while minimizing risks associated with inconsistent data.

B. Correlation hypothesis:

There is a correlation between human capital and competitive advantage
There is a correlation between relational capital and competitive advantage
There is a correlation between structural capital and competitive advantage

Table (6): Correlation matrix between independent variables and dependent variable

	Relational Capital	Structural Capital	Competitive Advantage
Human Capital	0.304*	0.513**	0.250*
Relational Capital		0.521**	0.054
Structural Capital			0.283*
Intellectual Capital			0.260*
*. Correlation is significant at the 0.05 level (2-tailed).			
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 6 shows there is a weak positive significant correlation between each of the independent variables human capital (0.250) and structural capital (0.283) with dependent variable of Competitive Advantage as well as there is no significant positive correlation between independent variables of relational capital (0.054) with dependent variable of Competitive Advantage. On the other hand, there is a weak positive significant correlation between the overall of independent variable Intellectual Capital (0.260) with dependent variable of Competitive Advantage. Investing in Human Capital can lead to better internal processes (structural capital) and improve external relationships (relational capital), both of which contribute to competitive advantage. Relational and Structural Capital are also closely linked, suggesting that external collaborations can help optimize internal operations. While relational capital alone may not directly drive competitive advantage, it can play a supporting role when combined with other types of capital. Besides, managers should adopt a holistic strategy to leverage the synergies between human, relational, and structural capital to maximize their competitive advantage.

Table (7): regression

	Coefficients			Model Summary		ANOVA	
	B	**t**	**P-Value**	**Correlation**	**R Square**	**F**	**P-Value**
(Constant)	2.245	3.536	0.001	0.250	0.143	4.413	0.040
Human Capital	0.339	2.101	0.040				
(Constant)	3.147	3.088	0.003	0.054	0.013	0.196	0.859
Relational Capital	0.105	0.443	0.659				
(Constant)	2.515	5.561	0.000	0.283	0.160	5.916	0.018
Structural Capital	0.269	2.432	0.018				

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 7 shows there is a weak positive relationship between Human Capital and Competitive Advantage (0.250), the model is fit or appropriate based on (F=4.413 and P-Value =0.040). Regression Coefficient (B) for Human Capital is 0.339, which means, increasing one unit for Human Capital will increase Competitive Advantage by 0.339. Determination of Coefficient (R2) reflects that 14.3% of the variation of Competitive Advantage is determined by Human Capital and the remaining variation is turning to other factors that effect on Competitive Advantage which is satisfied the first hypothesis.

Finally, there is no positive relationship between Relational Capital and Competitive Advantage (0.250), the model is not fit or appropriate based on (F=0.196 and P-Value =0.856) which is not satisfy the second hypothesis. Then, there is a weak positive relationship between Structural Capital and Competitive Advantage (0.250), the model is fit or appropriate based on (F=5.916 and P-Value =0.018). Regression Coefficient (B) for Structural Capital is 0.269, which means, increasing one unit for Structural Capital will increase Competitive Advantage by 0.269. Determination of Coefficient (R2) reflects that 16% of the variation of Competitive Advantage is determined by Structural Capital and the remaining variation is turning to other factors that effect on Competitive Advantage which is satisfied the third hypothesis. The R Square values for Human Capital, for Relational Capital, and for Structural Capital indicate that the models explain a modest portion of the variance in the dependent variable (Competitive Advantage). This suggests that while these factors contribute to competitive advantage, other variables not included in the model may also play significant roles. The model is significant (p = 0.040), suggesting that investments in human capital have a meaningful impact on competitive advantage. While the p-value (0.859) indicates that this model is not significant, suggesting that relational capital may not directly contribute to competitive advantage in this context. Additionally, the model is significant (p = 0.018), indicating that structural capital has a significant positive effect on competitive advantage. The positive coefficient suggests that for every unit increase in human capital, competitive advantage increases by

approximately 0.339 units. This reinforces the importance of investing in employee skills and knowledge. While The low coefficient and high p-value indicate that relational capital does not significantly impact competitive advantage in this analysis. Managers might need to reconsider the emphasis placed on external relationships in this context. A positive coefficient also indicates that structural capital positively influences competitive advantage. This suggests that managers should focus on enhancing organizational processes, systems, and infrastructure to gain a competitive edge.

Table (8): Simple Regression Analysis between the overall of independent variables (Intellectual Capital) and dependent variable (Competitive Advantage)

	Coefficients			Model Summary		ANOVA	
	B	**t**	**P-Value**	**Correlation**	**R Square**	**F**	**P-Value**
(Constant)	2.086	3.039	0.003	0.260	0.140	4.917	0.030
Intellectual Capital	0.375	2.218	0.030				

Source: The work of the researchers based on the results of the statistical analysis SPSS.

Table 8 shows there is a weak positive relationship between Intellectual Capital and Competitive Advantage (0.250), the model is fit or appropriate based on (F=4.917 and P-Value =0.030). Regression Coefficient (B) for Intellectual Capital is 0.375, which means, increasing one unit for Intellectual Capital will increase Competitive Advantage by 0.375. Determination of Coefficient (R2) reflects that 14.3% of the variation of Competitive Advantage is determined by Intellectual Capital and the remaining variation is turning to other factors that effect on Competitive Advantage which is satisfied the fourth hypothesis.

This indicates that the model explains 14% of the variance in the dependent variable (Competitive Advantage). For managers, this suggests that while intellectual capital has a notable impact, there are other significant factors affecting competitive advantage that may not be included in this model. Moreover, the model is statistically significant since the p-value is less than 0.05. This indicates that intellectual capital plays a meaningful role in contributing to competitive advantage. Managers should recognize that investments in intellectual capital are likely to yield positive outcomes for the organization. Besides, the positive coefficient indicates that for every unit increase in intellectual capital, competitive advantage increases by approximately 0.375 units. This emphasizes the importance of enhancing knowledge, innovation, and skills within the organization.

10. The recommendations

1. **Invest in Human Capital Development**: Given the generally positive perceptions of human capital but with noted areas for improvement, managers should prioritize targeted training and development programs. This could include leadership development, especially for the younger workforce, to enhance skills and fill perceived gaps.
2. **Enhance Relational Capital**: Since relational capital is highly rated, banks should focus on nurturing and expanding existing relationships with customers, suppliers, and other stakeholders. This can involve creating strategic partnerships and leveraging these relationships for innovation and market expansion.
3. **Strengthen Structural Capital**: With variability in perceptions of structural capital, managers should assess and improve internal processes, knowledge management systems, and accessibility of information. Investments in technology that facilitate better knowledge sharing can enhance overall operational efficiency.
4. **Optimize Competitive Strategies**: The analysis shows strengths in cost strategy but weaknesses in focus and excellence strategies. Managers should refine the focus strategy by clarifying target markets and aligning operational activities. Additionally, a concerted effort should be made to improve product quality and customer service to bolster the excellence strategy.
5. **Holistic Approach to Intellectual Capital**: Encourage collaboration between human, relational, and structural capital. A coordinated strategy that integrates these elements can maximize

competitive advantage. For instance, enhancing employee skills can lead to improved processes and stronger external relationships.

6. **Monitor and Evaluate Outcomes**: Regularly assess the impact of these initiatives on competitive advantage. Utilize metrics and feedback mechanisms to track progress and make necessary adjustments to strategies.
7. **Engage Employees**: Foster an organizational culture that encourages feedback and involvement from employees. This can enhance understanding and commitment to the strategies being implemented, particularly in the focus and excellence areas.

By addressing these recommendations, banks can leverage their intellectual capital more effectively to drive competitive advantage in the market.

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Demographic Data

Personal Data:

1. **Gender**: Male ..... Female .....
2. **Age**:
   - (25–30)
   - (31–40)
   - (41–50)
   - (51 and above)
3. **Educational Qualification**:
   - Secondary School
   - Diploma
   - Bachelor's Degree
   - Master's Degree
   - Doctorate
4. **Specialization**: .....
5. **Years of Service in Current Position**: .....
6. **Training Courses in Banking Management**:
   - None
   - Yes (Number of courses: .....)

Section One: Items Related to Human Capital

No.	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Employees undergo continuous training					
2	Employees possess high educational levels.					
3	Employees' skills are upgraded.					
4	Employees have creative ideas.					
5	Employees bring new ideas.					
6	Employees are encouraged to share new ideas.					
7	Employees possess innovative ideas.					
8	The manager ensures employees are happy.					
9	The manager understands all factors influencing employee satisfaction.					
10	The manager helps employees solve formal problems.					
11	All employees are happy working in the bank.					
12	All employees are willing to make extra efforts when needed.					
13	Employees dedicate their efforts to work.					

Section Two: Items Related to Relational Capital

No.	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
20	The customer database is updated continuously.					
19	Employees solve their problems through mutual cooperation.					
18	Employees' capabilities are enhanced through interactions.					
17	Customer feedback is shared across most bank units.					
16	The bank places significant focus on customer feedback.					

15	The bank regularly meets with customers.					
14	Customer data is updated regularly.					

Section Three: Items Related to Structural Capital

No.	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
21	The work environment in the bank is pleasant.					
22	Bank managers and employees communicate well.					
23	Knowledge enhancement is well-supported in the bank.					
24	The bank continuously develops new products and services.					
25	There is strong support for innovative ideas in the bank.					
26	The bank continuously works on improving service quality.					
27	The bank incorporates a lot of its information into structures and systems.					
28	Individuals have access to information systems when needed.					
29	The bank has the capabilities to develop its unique abilities.					
30	The bank's culture is supportive and comfortable.					
31	The bank uses computers for operational purposes.					
32	The bank is equipped with the latest information technology software.					
33	Information technology contributes to service quality					
34	The bank's systems and devices support innovation.					
35	Bank employees have high levels of authority.					
36	Employees are encouraged to take initiative.					

Part Two: Competitive Advantage

S.	Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Cost Strategy						
1	The cost of services at the bank is lower than other banks.					
2	The bank's procedures are simple and uncomplicated.					
3	There is a noticeable continuous reduction in costs over time.					
Focus Strategy						
4	The bank is ahead of others in offering new and distinctive services.					
5	There is ongoing awareness of the latest news regarding the bank's services.					
6	The bank offers multiple forms of services to provide freedom of choice.					

Differentiation Strategy

7	The bank works on continuous qualification and improvement of its employees' performance.					
8	The bank excels in providing its services with a high level of precision.					
9	The bank is keen on updating its devices and equipment to enhance its services, creating a distinctive image for the institution.					