*International journal of Engineering, Business and Management (IJEBM)*
*ISSN: 2456-8678*
*[Vol-5, Issue-2, Mar-Apr, 2021]*
*Issue DOI: https://dx.doi.org/10.22161/ijebm.5.2*
*Article DOI: https://dx.doi.org/10.22161/ijebm.5.2.4*

# Intellectual capital: A modern model to measure the value creation in a business

Bayad Jamal Ali[1], Govand Anwar[2]

[1]Business Administration Department, Komar University of Science and Technology, Sulaimani 46001, Kurdistan Region – Iraq
[2]Department of Business Administration, College of Administration and Financial Sciences, Knowledge University, 44001 Erbil, Kurdistan Region, Iraq

Received: 03 Jan 2021; Received in revised form: 27 Feb 2021; Accepted: 21 Mar 2021; Available online: 22 Apr 2021


***Abstract***— *Using a sample of 92 patients, this study looked into the impact of intellectual capital on the efficiency of private hospitals. The researchers used a quantitative approach to assess the effect of Intellectual capital (Human capital, Structural capital, and Relational capital) on long-term competitive advantage in private hospitals in Iraq's Kurdistan region. The research sample was selected using a random sampling method and conducted in various locations across Iraq's Kurdistan province. A total of 110 questionnaires were distributed, but only 92 people correctly completed them. The findings revealed that the most effective relationship with firm success was between human capital as an element of Intellectual capital, while the least effective relationship was between ownership as an element of Intellectual capital. Furthermore, our findings indicate that finance managers should use debts as a last resort in terms of intellectual capital. Finally, our research can be improved by using more controlled variables, a greater sample size, and data from a longer time span in the regression models. Other methods and steps can be used as well.*

***Keywords***— ***Human capital, Structural capital, Relational Capital, Value Creation.***

## I. INTRODUCTION

Profit maximization is one of industrial corporations' strategic goals. The principle has been around for a long time and is still at the core of business economics. According to the reader's microeconomics, the primary goal of any commercial enterprise is to maximize benefit (Mat Noor et al. 2021). As a result, this goal has been closely linked to the owner, who has succeeded in achieving it while taking into account the goals of financial managers or funding decisions, which often attempt to alter those decisions in order to meet market demands and maximize business profitability. On the other hand, the financial administration's ability to maximize value is very clear in terms of sense and measurement, and it should consider and consider all of the powerful factors that affect the role (Salimzadeh et al. 2020). The importance of this aim stems from the fact that profit is the economic justification for any firm's continued existence in the economy. It is also a useful tool for assessing the economy's overall performance. Furthermore, it is a significant source of internal financing (Özmen, 2018). The accomplishment of this aim, as well as legislative advocacy, reflects the financial decisions' progress. The decision on the funding scheme in the correct mix of issuers to borrow funds and property funds to determine the capital mixture is one of the most important decisions in financial management. This means that there is a capital mix that can contribute to increased profitability, enabling us to quantify the effect on the firm's profitability structure (Gusmão et al. 2018). The Trade-off Theory (TOT), which focuses primarily on factors such as the costs of bankruptcy, the agency, and the tax shield, is a theory of intellectual capital and the criteria that have an impact on the decision-making process to finance the company to emerge. While other theories, such as Pecking-Order Theory (POT), are based on knowledge contrast or heterogeneity, there is asymmetrical information between businesses and investors. The Market Timing Theory (MTT) theory, on the other hand, is based on the timing of

a company's funding needs as well as the conditions that exist at the moment (Anwar & Shukur, 2015). These theories have been tested in a variety of studies in order to better explain the funding decision, and the results have been mixed, resulting in a majority with a few significant differences in how a company decides on its intellectual resources (Anwar, 2017). The gap between theory and fact is still widening, and we need a better understanding. Many of the factors that have an impact on the capital market of developing countries, according to Kitonga, (2017), do not have statistical relevance that helps to understand the funding choices of the least developed countries. This has resulted in a multi-resolution study of the financing, with a plethora of factors impacting the company and its directors, making it hard to pinpoint a single factor responsible for understanding the financing decision, making it far more difficult to comprehend. As can be shown, the function in heterogeneity of experience between managers and investors affects financing decisions; this divergence in financial literature is responsible for the difference in financing decisions (Ali, 2021).

## II. LITERATURE REVIEW

This study will outline several studies exploring the impact of the capital system on business operations. Some research indicate a positive relationship between intellectual capital and firm results, while others show a negative relationship between these two variables. Anwar and Balcioglu (2016) looked at how businesses invested in education over time (2010-2016). The aim of this project is to determine how the financial system affects the competitiveness and valuation of businesses. Companies who chose an intellectual capital approach increased their market value, according to the report. Dohamid & Luddin, (2020), looked at 12 chemical companies listed on the Stock Exchange between 2009 and 2013. They used correlation analysis and regression to study the relationship between the company's Intellectual capital and financial performance in the statistical analysis, and discovered that asset sales were variable. The results of the analysis revealed that there is a positive relationship between return on assets and transition, which has a negative impact on ROA. Anwar and Shukur (2015), shareholder companies in Pakistan's textile sector at the time of the study (2011-2014). The aim of the thesis was to figure out how capital composition affects financial performance. The paper showed that intellectual capital and shareholder have a positive relationship. For the time period in question, (Demir et al. 2020) took a sample of 6 financial services firms listed on the Stock Exchange (2015- 2019). The relationship between production and intellectual capital was studied using correlation coefficient regression (Anwar & Abd Zebari, 2015). The study's results showed that the calculation was statistically significant in almost every company's equity return and equity debt relationship. It also discovered a statistically significant negative relationship between return on equity and debt-to-asset ratio. Ali (2021) investigated the impact of intellectual capital on bank performance between 2014 and 2020. The relationship between intellectual capital and the performance of banking models was approximated using multiple regression (Scott & Perez-Diaz, 2021). Asset returns, equity returns, and equity returns were used to measure performance, and intellectual capital determinants included long-term capital debt and a total debt-to-capital ratio of net debt to capital. The study discovered a clear link between the capital determinant structure and the banking industry's success. Centered on the time period (2014-2015) for companies listed in manufacturing firms, Anwar & Shukur (2015). The main goal of this investigation was to determine the connection between capital structure and business performance. To analyze data from annual reports for the same period, correlation and regression are used (Anwar & Surarchith, 2015). The results showed that the return on equity, net profit, and gross profit, as well as the return on assets, have no consistent debt relationship, that the gross profit margin and return on equity are mainly related to the debt assets to Intellectual capital ratio, and that Intellectual capital has a significant impact on total profit and return on equity. (Andavar & Ali, 2020) looked at a number of banks that were listed on the Stock Exchange between 2015 and 2019. Its aim was to investigate the impact of intellectual capital on outcomes. It used panel results, fixed and random effect models, and a method to test the study' hypotheses. The findings revealed that, as measured by return on assets, return on equity, and earnings per share of net profits, intellectual capital, as determined by assets liabilities, has a positive and statistically significant effect on Jordanian banks. In terms of land rights in relation to assets, the findings revealed a favorable effect and a significant return on assets, as well as an unfavorable and statistically significant impact on both earnings per share of net profit and return on equity, despite the fact that the size of the bank has a statistically positive impact on bank profitability. (Viitala et al. 2017) looked at the effect of intellectual capital on the financial output of 85 companies in the capital city of the century (2014 - 2019). According to the research, the capital system has a positive effect on financial performance as measured by equity profits. Meanwhile, return on investment has a negative impact on net profit earnings per share. Anwar, (2017), investigated

the impact of intellectual capital on Indian bank success over time (2008-2012). He investigated the relationship between the variables using regression analysis, with the results revealing a positive relationship between short-term debt and profitability as measured by return on equity. Anwar and Ghafoor (2017) conducted a survey of businesses over a two-year period (2012-2014). The aim of the study was to determine the effect of intellectual capital on a firm's success, and the results of the statistical analysis revealed a negative relationship between financial leverage and the firm's output (Yardan & Aydin, 2018). Researchers used multiple regressions on performance indicators including asset returns and profit margin estimation, short-term debt to total assets, long-term debt to total assets, and total equity Intellectual capital variables to determine the impact of the capital structure on the performance of manufacturing firms (Ali, 2021). The results revealed a statistically significant negative relationship between short-term debt and overall assets, yield on assets, operating margin, and total debt. The results showed that all three iterations of the capital structure, current liabilities for total assets, long-term total assets and liabilities, total liabilities for total assets, unfavorable effects on income before interest and taxes, return on assets, earnings per share, and net profit margins, all had unfavorable effects on profits before interest and taxation, return on assets, earnings per share, and net profit margins (Nyong'a & Maina, 2019). Multiple linear regressions were used by Anwar, (2016) to assess the effect of intellectual capital on the financial performance of Palestinian financial institutions. The report concluded that net equity deposits and yield on investment provided a good and significant return on impact asset rights and bank stock valuation. Loans to deposits and loans to savings, on the other hand, have had little effect on the banks' financial performance (Abdullah et al. 2017). Via a correlation analysis and regression of financial statements, Javed, Andavar, and Ali, (2020), based on shares, investigate the relationship between Intellectual capital and profitability. According to the study's results, there is a positive relationship between financial leverage, financial performance, and company size. Mubarak & Yusoff, (2019) used the CT time series slope data to assess the relationship between intellectual capital and financial performance of listed banks over the period 2016-2018. Financial leverage, as measured by gross loan entitlements to owners and short-term debt, has a negative and statistically significant impact on bank financial performance as measured by assets revenue and equity profits, according to the report. Anwar (2016) conducted a firm survey at the time in question (2012-2015). The study's aim was to improve operational performance by choosing the best intellectual resources while minimizing risk. The results showed that when a company has leverage over intellectual resources, output is rationalized and the return on equity rises. Anwar, (2017) examined the best Intellectual capital in companies over a five-year span using annual data. The data revealed that a firm's turnover, scale, age, and asset size were all positively related to its performance. Meanwhile, real assets and ROA as a performance measure have a clear negative correlation. Ali (2020) examined the impact of labor resource management policies on the viability and valuation of Jordanian businesses. With a measure of demand and profitability, he observed a positive relationship between rising economic and business size and growing earnings. The findings show that a company's value and long-term viability have a positive impact on conservative investment policies. They discovered a close connection between profitability and short-term debt to total assets, as well as long-term debt to total assets. Hameed & Anwar, (2018) looked into the relationship between intellectual capital and construction company progress over time (2015 to 2020). The mathematical analysis of the research parameters revealed a connection between capital configuration and performance. Anwar & Ghafoor, (2017) published a study on intellectual capital and its effect on the financial performance of businesses. The results revealed a negative relationship between a company's intellectual capital and its financial performance. Anwar and Shukur (2015) investigated the effect of working capital management on profitability on the Stock Exchange. It confirmed that capital management is one of the most significant determinants of a company's stock valuation because it has a direct impact on the company's viability. As a result, companies will maintain a fragile equilibrium. As the problem relates to the preservation of intellectual resources, there is a trade-off between profitability and risk. To evaluate these findings, the analysis used data processing techniques. Abdullah et al. (2017) looked at businesses over time (2015-2017) to see if there was a connection between working capital management and profitability (Anwar & Climis, 2017). They came to the conclusion that there was a negative relationship between variables in working capital management. These companies' financial managers will boost the shareholder value (M'Mugambi et al. 2021).

## III. INTELLECTUAL CAPITAL

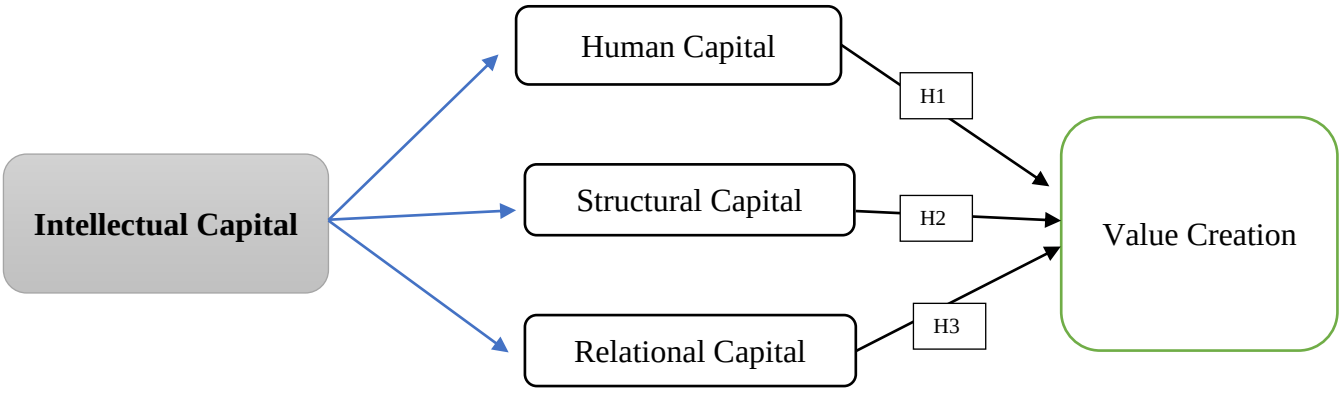
There are several options in the financial reporting literature for expressing the size of a company's net assets, annual sales, revenue, and the size of the overall employment of employees, in accordance with the scale of

the company's net assets, annual sales, income, and the size of the overall jobs of employees, in accordance with the scale of the company's net assets, annual sales, income, and the size (Jabbar & Hussein, 2017). The company's value will be calculated using the standard logarithm of its total assets. The significance of the organization's size, which is regarded as one of the most significant determinants of intellectual capital. As a result, the bigger the institution's scale, the more diverse and less fluctuating its annual profits would be, reducing the financial obligations associated with them and improving their ability to tolerate a high proportion of debt in oversized companies with lower Intellectual capital (Anwar & Qadir, 2017). As a result, the TOT hypothesis sees a positive association between business size and the proportion of leverage in Intellectual capital. The number of years since the organization's inception and results of its tasks can be used to calculate the company's age. It can be defined as the normal logarithm of the number of years, according to Tikkanen, (2020), since many academics believe that if a firm is only one year older, it is more important for its credibility as an indicator of the firm's durability and, therefore, its ability to collect debts. Meanwhile, POT believes there is an inverse relationship between the age of a company and its level of leverage (Anwar & Louis, 2017). In new businesses, the knowledge gap is high, allowing companies to choose less risky sources of funding for the information gap, such as borrowing funds (Ali& Anwar, 2021 ). The company's profitability can be determined by calculating a return on assets, which is defined as net income before taxes divided by total assets. Since the firm's earnings have a direct impact on the company's financial risk, this metric is the most common in studies that have tested the variables that shape Intellectual capital and the importance of that aspect, since the more successful the company is, the less likely it is to default, which means an increase in borrowing potential and therefore an increase in its capacity to gain tax savings. On the other hand, a company's output would be better if it can finance its operations and increase its revenue, making it less dependent on foreign sources of funding, since a company that earns a lot of money has the most borrowing potential and can take advantage of tax benefits from borrowing (Hameed & Anwar, 2018). The TOT hypothesis implies a positive relationship between a company's profits and its debt share in its financial structure. Meanwhile, according to the POT theory, businesses that make substantial profits would benefit from these profits by using them to finance their ventures without the need for additional financial capital (Abdullah & Anwar, 2021). It also suggests that the company's output is inversely proportional to the proportion of leverage in its Intellectual resources. The liquidity ratio, which is calculated by converting current assets into total assets, may be used to measure the firm's liquidity (Mardones & Cuneo, 2020). For the purposes of this study, it will be focused on the liquidity ratio reported by the companies in their financial statements, as well as the importance of this factor in the general law set out in the financial management literature. If the company's uncertainties decrease, its liquidity increases. As a result, TOT contends that there is a direct connection between the firm's liquidity and its debt, while POT maintains that the firm has the strong liquidity it requires to fund and would not need to borrow to meet its needs (Khanh et al. 2020). It also means a negative relationship between the company's liquidity and the amount of leverage in its intellectual resources. According to Anwar (2017), the percentage of fixed tangible assets can be calculated by dividing fixed assets by total assets. The rise in the ratio of tangible capital assets in the company leads to an increase in value, so this factor plays an important role in the decision to finance the business (Alayoubi et al. 2020). Liquidation of the company, which is used to improve the company's negotiating position for credit and low prices, since tangible fixed assets hold their value better than intangible assets, which are liquidated (Castellanos & George, 2020).

## IV. METHOD

The study was carried out in Erbil's private hospitals. The researchers used a quantitative approach to assess the effect of Intellectual capital (Human capital, Structural capital, and Relational capital) on long-term competitive advantage in private hospitals in Iraq's Kurdistan region. A questionnaire was used to assess the current thesis. Sample design refers to the methodology or method that the researcher is willing to consider in selecting items for the survey. The research sample was selected using a random sampling method and conducted in various locations across Iraq's Kurdistan province. A total of 110 questionnaires were distributed, but only 92 people correctly completed them. To investigate the impact of Intellectual capital (Human capital, Structural capital, and Relational capital) on long-term competitive advantage in private hospitals in Iraq's Kurdistan region. On a five-point scale ranging from unimportant to extremely important, participants were asked to rate the importance of each item.

**Conceptual framework**




**Hypothesis one:** There is a significant relationship between human capital as element of Intellectual capital with value creation.

**Hypothesis two:** There is a significant relationship between ownership as element of Intellectual capital with value creation.

**Hypothesis three:** There is a significant relationship between relational capital as element of Intellectual capital with value creation.

## V. FINDINGS

The current research focused on assessing the impact of Intellectual capital(Human capital, Structural capital, and Relational capital) to measure the influence on business value creation. In order to measure Intellectual capitalas Intangible resources for value creation, the researchers set three independent variables as intellectual capital dimensions, theses variables are (Human capital, Structural capital, and Relational capital) on the other hand value creation. The researchers applied simple regression analysis to measure the influence of each independent variable separately on value creation as private hospitalsin Kurdistan region of Iraq.

*Table.1: KMO and Bartlett Sphericity Test of Self-rating Items*

| No | Factors | N of items | Sample | KMO | Bartlett test | |
|---|---|---|---|---|---|---|
| | | | | | Chi-Square | Sig |
| 1 | Human capital | 10 | 92 | .829 | 6021.3 | .000 |
| 2 | Structural capital | 11 | 92 | | | |
| 3 | Relational capital | 10 | 92 | | | |
| 4 | Value creation | 12 | 92 | | | |

As we can see in table (1), the outcome of KMO is .829 which is higher than .001 this indicates that the sample size used for the current study was more than adequate. Furthermore, the result of Chi-Square is 6021.3with the significant level .000.

*Table 2: Factor Analysis*

| **No** | **Components** | **Number of Items** | **N** | **Eigenvalue** | **Rotation Sums of Squared Loadings** | |
|---|---|---|---|---|---|---|
| | | | | | **% of Variance** | **Cumulative** |
| 1 | Human capital | 10 | 92 | 2.366 | 19.278 | 22.326 |
| 2 | Structural capital | 11 | 92 | 4.025 | 17.285 | 27.231 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | Relational capital | 10 | 92 | 1.258 | 21.396 | 22.966 |
| 4 | Value creation | 12 | 92 | 2.74 | 17.552 | 20.201 |

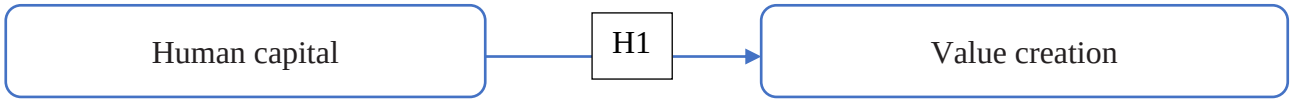
Table (2) demonstrates three independent variables (Human capital,Structural capital, andRelational capital) and a dependent variable(Value creation). As for Human capital as first element of Intellectual capital, which had tenitem explained 19.278% of the total variance. As for Structural capitalas second element of Intellectual capital, which had eleven itemsexplained 17.285% of the total variance. As for CoRelational capital as third element of Intellectual capital, which had ten items explained 21.396% of the total variance. And finally, as for Sustainable Value creation as dependent variable, which had twelve items explained 17.552% of the total variance.

*Table 3: Reliability Test (Human capital and value creation)*

| **Reliability Statistics** | | |
|---|---|---|
| Factor | Cronbach's Alpha | N of Items |
| Human capital | .748 | 10 |
| Structural capital | .761 | 11 |
| Relational capital | .728 | 10 |
| Value creation | .766 | 12 |

As seen in table (3), the reliability analysis for 43 items used to measure the influence Intellectual capital(Human capital, Structural capital, and Relational capital) to measure the influence on sustained competitive advantage in private hospitals in Kurdistan region of Iraq. The above 43 questions were distributed as follow; 10 items for Human capital, 11 items for Structural capital, 10 items for Human capital, and 12 items for Value creation. The researchers applied reliability analysis to find out the reliability for each factors, the findings revealed as follow: as for Human capital was found the Alpha to be .748 for 10 questions which indicated that all 10 questions used to measure Human capital were reliable for the current study, as for Structural capitalwas found the Alpha to be .761 for 11 questions which indicated that all 11 questions used to measure Structural capitalwere reliable for the current study, as for Human capital was found the Alpha to be .728 for 10 questions which indicated that all 10 questions used to measure Human capital were reliable for the current study, and finally as for Value creation as dependent variable was found the Alpha to be .766 for 12 questions which indicated that all 12 questions used to measure Value creation as dependent variable were reliable for the current study.

**First Research Hypothesis**




**Hypothesis one:** There is a significant relationship between human capital as element of Intellectual capital with value creation.

*Table 4: Correlation analysis between Human capital and value creation*

| **Correlations** | | | |
|---|---|---|---|
| Variables | Pearson Correlation | Value creation | Human capital |
| Value creation | Pearson Correlation | 1 | .701** |
| | Sig. (2-tailed) | | .000 |
| | N | 92 | 92 |
| Human capital | Pearson Correlation | .701** | 1 |
| | Sig. (2-tailed) | .000 | |

| | | | |
|---|---|---|---|
| | N | 92 | 92 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

As it can be seen in table (4), the correlation analysis between human capital as a value creationas a tangible resource to measure its influence on value creation in private hospitals in Kurdistan region of Iraq. The finding revealed that the value of Pearson correlation (r= .701**, p<0.01), this indicated that there is positive and strong correlation between human capitalas self-leadership skill and value creation.

*Table 5-Model Summary of Human capital*

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .709 | .697 | .638 | .23741 |
| a. Predictors: (Constant), Human capital | | | | |

Regression analysis is the study of interactions between variables. Y=f(x1,x2,...Xc) The aim of regression analysis is to determine how Y can affect and alter X. The Human capital approach is treated as an independent variable in this section, while value creation is treated as a dependent variable. The volatility of a comparative advantage will be used to calculate its total difference. The variations are determined by calculating the sum of the squares of the expected competitive advantage values by the overall mean divided by the number of participants. After dividing the variance by the overall variance of comparative benefit, the researcher discovered the sum or percentage of total differences or variances that are compensated for using regression analysis. The number can range from 0 to 1 and is defined by R Square. The value of R square =.697 as seen in Table (5), indicating that 69 percent of total variation has been clarified.

*Table 6-ANOVA of Human capital*

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 112.521 | 1 | 121.025 | 201.201 | .000[b] |
| | Residual | 32.582 | 625 | .039 | | |
| | Total | 145.103 | 626 | | | |
| a. Dependent Variable: Value creation | | | | | | |
| b. Predictors: (Constant), Human capital | | | | | | |

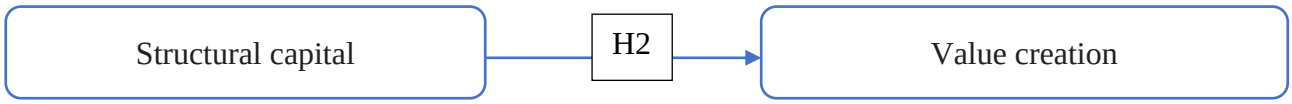
Table (6) shows that the F value for Human capital as an independent variable =201.201, indicating that there is a significant relationship between Human capital and value creation (201.201>1).

*Table 7-Coefficients Analysis Human capital and value creation*

| Coefficients | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .174 | .033 | | 2.652 | .000 |
| | Human capital | .692 | .014 | .701 | 25.451 | .000 |
| a. Dependent Variable: Value creation | | | | | | |

Table (7) shows the implications of the first hypothesis: Human capitalstrongly predicts value creation (Beta is weight .701, p.001), implying that Human capital would have a clear beneficial relationship with value creation based on these findings.

**Second Research Hypothesis**




**Hypothesis two:** There is a significant relationship between ownership as element of Intellectual capital with value creation.

*Table 8: Correlation analysis between Structural Capital and value creation*

| Correlations | | | |
|---|---|---|---|
| Variables | Pearson Correlation | Value creation | Structural capital |
| Value creation | Pearson Correlation | 1 | .633** |
| | Sig. (2-tailed) | | .000 |
| | N | 92 | 92 |
| Structural capital | Pearson Correlation | .633** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 92 | 92 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

As it can be seen in table (8), the correlation analysis between structural capitals a value creations a tangible resource to measure its influence on value creation in private hospitals in Kurdistan region of Iraq. The finding revealed that the value of Pearson correlation (r= .633**, p<0.01), this indicated that there is positive and strong correlation between structural capitals self-leadership skill and value creation.

*Table 9-Model Summary of Structural capital*

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .712 | .698 | .674 | .18365 |
| a. Predictors: (Constant), Structural capital | | | | |

Regression analysis is the study of interactions between variables. Y=f(x1,x2,...Xc) The aim of regression analysis is to determine how Y can affect and alter X. The structural capitalapproach is treated as an independent variable in this section, while value creation is treated as a dependent variable. The volatility of a comparative advantage will be used to calculate its total difference. The variations are determined by calculating the sum of the squares of the expected competitive advantage values by the overall mean divided by the number of participants. After dividing the variance by the overall variance of comparative benefit, the researcher discovered the sum or percentage of total differences or variances that are compensated for using regression analysis. The number can range from 0 to 1 and is defined by R Square. The value of R square =.698as seen in Table (9), indicating that 69 percent of total variation has been clarified.

*Table 10-ANOVA of Structural capital*

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 121.251 | 1 | 122.365 | 22.521 | .000b |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Residual | 31.582 | 387 | .041 | | |
| | Total | 152.833 | 388 | | | |
| a. Dependent Variable: Value creation | | | | | | |
| b. Predictors: (Constant), Structural capital | | | | | | |

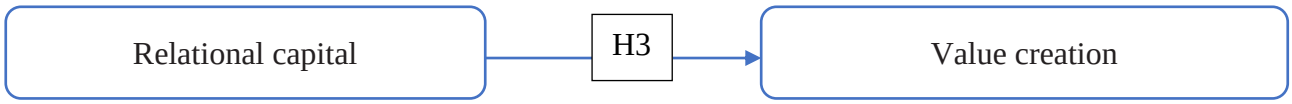
Table (10) shows that the F value for structural capitalas an independent variable =22.521, indicating that there is a significant relationship between structural capitaland value creation (22.521>1).

*Table 11-Coefficients Analysis Structural Capital and value creation*

| Coefficients | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .258 | .031 | | 2.658 | .000 |
| | Structural capital | .599 | .033 | .604 | 2.365 | .000 |
| a. Dependent Variable: Value creation | | | | | | |

Table (11) shows the implications of the second hypothesis: Structural capitalstrongly predicts value creation (Beta is weight .604, p.001), implying that structural capitalwould have a clear beneficial relationship with value creation based on these findings.

**Third Research Hypothesis**




**Hypothesis three:** There is a significant relationship between relational capital as element of Intellectual capital with value creation.

*Table 12: Correlation analysis between Relational capital andvalue creation*

| Correlations | | | |
|---|---|---|---|
| Variables | Pearson Correlation | Value creation | Relational capital |
| Value creation | Pearson Correlation | 1 | .672** |
| | Sig. (2-tailed) | | .000 |
| | N | 92 | 92 |
| Relational capital | Pearson Correlation | .672** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 92 | 92 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

As it can be seen in table (12), the correlation analysis between relational capital as a value creation as a tangible resource to measure its influence on value creation in private hospitals in Kurdistan region of Iraq. The finding revealed that the value of Pearson correlation (r= .672**, p<0.01), this indicated that there is positive and strong correlation between relational capital as self-leadership skill and value creation.

*Table 13-Model Summary of Structural capital*

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .558 | .521 | .501 | .1077 |
| a. Predictors: (Constant), Relational capital | | | | |

Regression analysis is the study of interactions between variables. Y=f(x1,x2,...Xc) The aim of regression analysis is to determine how Y can affect and alter X. The relational capitalis treated as an independent variable in this section, while value creation is treated as a dependent variable. The volatility of a comparative advantage will be used to calculate its total difference. The variations are determined by calculating the sum of the squares of the expected competitive advantage values by the overall mean divided by the number of participants. After dividing the variance by the overall variance of comparative benefit, the researcher discovered the sum or percentage of total differences or variances that are compensated for using regression analysis. The number can range from 0 to 1 and is defined by R Square. The value of R square =.521as seen in Table (13), indicating that 52 percent of total variation has been clarified.

*Table 14-ANOVA of Relational capital*

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 104.02 | 1 | 101.121 | 116.253 | .000[b] |
| | Residual | 19.582 | 399 | .047 | | |
| | Total | 123.602 | 400 | | | |
| a. Dependent Variable: Value creation | | | | | | |
| b. Predictors: (Constant), Relational capital | | | | | | |

Table (14) shows that the F value for relational capitalas an independent variable =116.253, indicating that there is a significant relationship between relational capitaland value creation (116.253>1).

*Table 15-Coefficients Analysis Relational capital andvalue creation*

| Coefficients | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .261 | .022 | | 2.356 | .000 |
| | Relational capital | .629 | .098 | .633 | 21.633 | .000 |
| a. Dependent Variable: Value creation | | | | | | |

Table (1415 shows the implications of the thirdhypothesis: relational capitalstrongly predicts value creation (Beta is weight .633, p.001), implying that Relational capitalwould have a clear beneficial relationship with value creation based on these findings.

## VI. CONCLUSION

Using a sample of 92 patients, this study looked into the impact of intellectual capital on the efficiency of private hospitals. The company's profitability can be determined by calculating a return on assets, which is defined as net income before taxes divided by total assets. Since the firm's earnings have a direct impact on the company's financial risk, this metric is the most common in studies that have tested the variables that shape Intellectual capital and the importance of that aspect, since the more

successful the company is, the less likely it is to default, which means an increase in borrowing potential and therefore an increase in its capacity to gain tax savings. On the other hand, a company's output would be better if it can fund its operations and revenue growth, and therefore be less dependent on foreign sources of funding, since a company with a large income has the most borrowing potential and can take advantage of tax benefits from borrowing. The findings revealed that the most effective relationship with value development was between human capital as an element of Intellectual capital, while the least effective relationship was between ownership as an element of Intellectual capital. Furthermore, our findings indicate that finance managers should use debts as a last resort in terms of intellectual capital. Finally, our research can be improved by using more controlled variables, a greater sample size, and data from a longer time span in the regression models. Other methods and steps can be used as well.

## REFERENCES


[1] Mat Noor, D., Nordin, D., Mohd, R., Rahim, A., Sakinah, S., & Shaikh, D. (2021). The Mediation Effect of Strategic Leadership in the Relationship between Knowledge Management, Competitive Intelligence and Business Strategy Formulation. Journal of Contemporary Issues in Business and Government, 27(1), 2271-2285.

[2] Salimzadeh, K., Mohammadi, E., & Salimzadeh, J. (2020). Investigating the Role of Strategic Leadership on Strategic Innovation with the Role of Enhancing Alertness (Case Study: Manufacturing Companies of Ilam Province). Future study Management, 31(121).

[3] Özmen, H. I. (2018, December). The Achilles' Heel of Strategic Management: Strategic Leadership in a Chaotic Environment. In International Symposium on Chaos, Complexity and Leadership (pp. 123-135). Springer, Cham.

[4] Gusmão, F. D., Christiananta, B., & Ellitan, L. (2018). The Influence of Strategic Leadership and Organizational Learning on Organizational Performance with Organizational Citizenship Behavior as an Intervening Variable. International Journal of Scientific Research and Management, 6(04).

[5] Anwar, G., & Shukur, I. (2015). The Impact of Training and Development on Job Satisfaction: A Case Study of Private Banks in Erbil. International Journal of Social Sciences & Educational Studies, 2(1), 65.

[6] Kitonga, D. M. (2017). Strategic leadership practices and organizational performance in not-for-profit organizations in Nairobi County in Kenya (Doctoral dissertation, COHRED, JKUAT).

[7] Anwar, G., & Shukur, I. (2015). Job satisfaction and employee turnover intention: A case study of private hospital in Erbil. International Journal of Social Sciences & Educational Studies, 2(1), 73.

[8] Ali, B. J. (2021). Assessing (The impact) of advertisement on customer decision making: Evidence from an educational institution. Ali, BJ (2021). Assessing (The impact) of advertisement on customer decision making: Evidence from an educational institution. Afak for Science Journal, 6(01), 267-280.

[9] Dohamid, A. G., & Luddin, M. R. (2020). Strategic Leadership For The Implementation of Three Values of Higher Education Performed by The Indonesian Defense University (IDU) In The 2015-2018 Period. IJHCM (International Journal of Human Capital Management), 4(1), 82-86.

[10] Anwar, G., & Shukur, I. (2015). the impact of recruitment and selection on job satisfaction: Evidence from private school in Erbil. International Journal of Social Sciences & Educational Studies, 1(3), 4-13.

[11] Demir, A., Maroof, L., Khan, N. U. S., & Ali, B. J. (2020). The role of E-service quality in shaping online meeting platforms: a case study from higher education sector. Journal of Applied Research in Higher Education, 1-28

[12] Anwar, G., & Abd Zebari, B. (2015). The Relationship between Employee Engagement and Corporate Social Responsibility: A Case Study of Car Dealership in Erbil, Kurdistan. International Journal of Social Sciences & Educational Studies, 2(2), 45.

[13] Scott, L., & Perez-Diaz, M. (2021). Strategic Leadership: Building Collaboration in the Establishment of Ethnic Studies Courses in Texas. In Challenges to Integrating Diversity, Equity, and Inclusion Programs in Organizations (pp. 215-229). IGI Global.

[14] Anwar, G., & Surarchith, N. K. (2015). Factors Affecting Shoppers' Behavior in Erbil, Kurdistan–Iraq. International Journal of Social Sciences & Educational Studies, 1(4), 10.

[15] Andavar, V., & Ali, B. (2020). Rainwater for Water Scarcity Management: An Experience of Woldia University (Ethiopia). ANDAVAR, V., ALI, BJ, & ALI, SA (2020). Rainwater for Water Scarcity Management: An Experience of Woldia University

(Ethiopia). The Journal of Business Economics and Environmental Studies, 10(4), 29-34.

[16] Viitala, R., Kultalahti, S., & Kangas, H. (2017). Does strategic leadership development feature in managers' responses to future HRM challenges?. Leadership & Organization Development Journal.

[17] Anwar, G., & Shukur, I. (2015). The Impact of Service Quality Dimensions on Students' Satisfaction. International Journal of Social Sciences & Educational Studies, 76.

[18] Anwar, K. (2017). Analyzing the conceptual model of service quality and its relationship with guests'satisfaction: a study of hotels in erbil. *The International Journal of Accounting and Business Society*, 25(2), 1-16.

[19] Yardan, E. D., & Aydin, G. Z. (2018). Strategic Leadership in Healthcare. Health Sciences Research in the Globalizing World, 874.

[20] Ali, B. J. (2021). Impact of consumer animosity, boycott participation, boycott motivation, and product judgment on purchase readiness or aversion of Kurdish consumers in Iraq. Journal of Consumer Affairs.

[21] Anwar, K. (2016). Comparison between cost leadership and differentiation strategy in agricultural businesses. Custos E Agronegocio on Line, 12(2), 212-231.

[22] Nyong'a, T. M., & Maina, R. (2019). Influence of strategic leadership on strategy implementation at Kenya Revenue Authority, southern region in Kenya. International Academic Journal of Human Resource and Business Administration, 3(5), 128-159.

[23] Abdullah, M. S., Toycan, M., & Anwar, K. (2017). The cost readiness of implementing e-learning. Custos E Agronegocio On Line, 13(2), 156-175.

[24] Anwar, K., & Balcioglu, H. (2016). The relationship between transformational leadership characteristics and effectiveness: A case study of construction companies in Erbil. International Journal of Science Technology and Management, 5(2), 250-256.

[25] Mubarak, M. F., & Yusoff, W. F. N. (2019). Impact of strategic leadership on strategy implementation. British Journal of Management and Marketing Studies, 2(1), 32-43.

[26] Anwar, K. (2017). The Role of Effective Leadership in Crisis Management: Study of Private Companies in Kurdistan. Qalaai Zanist Scientific Journal, 2(4), 326-338.

[27] Ali, B. (2020). Impact of COVID-19 on Consumer Buying Behavior Toward Online Shopping in Iraq. Ali, BJ (2020). Impact of COVID-19 on consumer buying behavior toward online shopping in Iraq. Economic Studies Journal, 18(42), 267-280.

[28] Hameed, A. A., & Anwar, K. (2018). Analyzing the Relationship between Intellectual Capital and Organizational Performance: A Study of Selected Private Banks in Kurdistan. International Journal of Social Sciences & Educational Studies, 4(4), 39.

[29] Anwar, K., & Ghafoor, C. (2017). Knowledge management and organizational performance: A study of private universities in Kurdistan. International Journal of Social Sciences & Educational Studies, 4(2), 53.

[30] Chan, C. W. (2018). Leading today's kindergartens: Practices of strategic leadership in Hong Kong's early childhood education. Educational Management Administration & Leadership, 46(4), 679-691.

[31] Anwar, K., & Climis, R. (2017). Analyzing The Relationship Between Types Of Advertisement And Customer Choice: A Study Of Retailer Stores In Erbil. *The International Journal of Accounting and Business Society*, 25(2), 43-52.

[32] M'Mugambi, D. K., Okeyo, W., & Muthoka, M. (2021). The Role of Strategic Leadership Style on Compliance with Public Service Ethics in the County Governments of Kenya. Journal of Human Resource & Leadership, 5(1), 46-61.

[33] Anwar, K. (2017). FACTORS AFFECTING STOCK EXCHANGE INVESTMENT IN KURDISTAN. The International Journal of Accounting and Business Society, 25(1), 32-37.

[34] Jabbar, A. A., & Hussein, A. M. (2017). The role of leadership in strategic management. International Journal of Research-Granthaalayah, 5(5), 99-106.

[35] Anwar, K., & Qadir, G. H. (2017). A Study of the Relationship between Work Engagement and Job Satisfaction in Private Companies in Kurdistan. International Journal of Advanced Engineering, Management and Science, 3(12), 239944.

[36] Tikkanen, H. (2020). Strategic Leadership and Organizational Transformation: A Leadership History of the British Royal Navy during the 'Fisher Era'1904–1919. JYU dissertations.

[37] Alia, B. J.(2020) Consumer attitudes towards healthy and organic food in the Kurdistan region of Iraq. Journal of Growing Science, 1-8.

[38] Anwar, K. (2017). Leading Construction Project Teams: The Effectiveness of Transformational Leadership in Dynamic Work Environments in

Kurdistan. International Journal of Advanced Engineering, Management and Science, 3(10), 239925.

[39] Tikkanen, H. (2020). Strategic Leadership and Organizational Transformation: A Leadership History of the British Royal Navy during the 'Fisher Era'1904–1919. JYU dissertations.

[40] Anwar, K., & Louis, R. (2017). Factors Affecting Students' Anxiety in Language Learning: A Study of Private Universities in Erbil, Kurdistan. International Journal of Social Sciences & Educational Studies, 4(3), 160.

[41] Ali, B., & Anwar, G. (2021). The balanced scorecard's evolution as a strategic mechanism at banking sectors. International Journal of English Literature and Social Sciences, 6(1); 471-478 https://dx.doi.org/10.22161/ijels.61.63

[42] Tikkanen, H. (2020). Strategic Leadership and Organizational Transformation: A Leadership History of the British Royal Navy during the 'Fisher Era'1904–1919. JYU dissertations.

[43] Abdullah, N., & Anwar, G. (2021). An Empirical Analysis of Natural Gas as an Alternative Fuel for Internal Transportation. International Journal of English Literature and Social Sciences, 6(1) ; 479-485 https://dx.doi.org/10.22161/ijels.61.64

[44] Alayoubi, M. M., Al Shobaki, M. J., & Abu-Naser, S. S. (2020). Strategic leadership practices and their relationship to improving the quality of educational service in Palestinian Universities. International Journal of Business Marketing and Management (IJBMM), 5(3), 11-26.

[45] Ali, B., & Anwar, G. (2021). The Effect of Marketing Culture Aspects of Healthcare Care on Marketing Creativity. International Journal of English Literature and Social Sciences, 6(2); 171-182 https://dx.doi.org/10.22161/ijels.62.25

[46] Shao, Z. (2019). Interaction effect of strategic leadership behaviors and organizational culture on IS-Business strategic alignment and Enterprise Systems assimilation. International Journal of Information Management, 44, 96-108.

[47] Abdullah, N., & Anwar, G. (2021). Inspiring future entrepreneurs: The effect of experiential learning on the entrepreneurial intention at higher education. International Journal of English Literature and Social Sciences, 6(2) ; 183-194 https://dx.doi.org/10.22161/ijels.62.26

[48] Abdullah, N., & Anwar, G. (2021). The impact of Human resource management practice on Organizational performance. International journal of Engineering, Business and Management (IJEBM) 5(1) ; 35-47 https://dx.doi.org/10.22161/ijebm.5.1.4

[49] Keeton, W. (2018). Command, leadership, intelligence and management (CLIM): A proposed theory for improved strategic leadership. FIIB Business Review, 7(2), 146-151.

[50] Ali, B & Anwar, G. (2021). Factors Influencing the Citizens' Acceptance of Electronic Government. International journal of Engineering, Business and Management (IJEBM) 5(1) ; 48-60 https://dx.doi.org/10.22161/ijebm.5.1.5

[51] Asif, M. (2020). Strategic leadership and ambidextrous learning. International Journal of Quality and Service Sciences.

[52] Abdullah, N., & Anwar, G. (2021). Global Financial Outlook during the COVID-19 Pandemic: The role of effective leadership styles on Financial outlook. International journal of Engineering, Business and Management (IJEBM) 5(2) ; 8-20 https://dx.doi.org/10.22161/ijebm.5.2.2

[53] Fischer, T., Dietz, J., & Antonakis, J. (2017). Leadership process models: A review and synthesis. Journal of Management, 43(6), 1726-1753.

[54] Ali, B & Anwar, G. (2021). An Empirical Study of Employees' Motivation and its Influence Job Satisfaction. International journal of Engineering, Business and Management (IJEBM) 5(2) ; 21-30 : https://dx.doi.org/10.22161/ijebm.5.2.3

[55] Castellanos, J. D., & George, B. (2020). Boardroom leadership: The board of directors as a source of strategic leadership. Economics and Business Review, 6(1), 103-119.