TECHNIUM
SOCIAL SCIENCES JOURNAL

www.techniumscience.com

Vol. 67/2025

A New Decade for Social Changes

PLUS COMMUNICATION
International Communication & PR

TECHNIUM SOCIAL SCIENCES JOURNAL

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

The Role of Intellectual Capital in Sustainable Performance: Evidence from Iraq

Al-Gburi, Hayder Jameel Ahmed[1], Mohsin, Sara AbdulalKareem[2]

[1]Karbala Technical Institute, AL-Furat Al-Awsat Technical University, Karbala, Iraq,
[2]General Directorate of Karbala Education, Karbala, Iraq

haider86@atu.edu.iq, saranas48@gmail.com

Abstract. This study aims to explain the impact of intellectual capital in sustainable performance for a sample of telecommunication corporations listed on the Iraqi Stock Exchange. Our research sample included Asia Cell for 2012–2023, as use models for measuring intellectual capital Public (2000) and developed in models MVAIC, and this includes six for capital, "where intellectual capital efficiency's (ICE) connection to human capital (HC), HCE human capital efficiency, SCE structural capital efficiency, RCE relational capital efficiency, HC is employees' salaries and wages, and RC is marketing, selling, and advertising expenses." To measure the sustainable performance as a dependent variable and to test the hypotheses, a statistical program (SPSS) was used. The results of our research show the impact of intellectual capital in various types or forms on the company's performance and sustainability.

Keywords. Sustainability, intellectual capital, sustainable performance

1. Introduction

As the economy's focus has shifted from manufacturing to knowledge, the role of intellectual capital in creating value for a corporation in the capital market has become much more important.(Abhayawansa & Guthrie, 2010) (Saruchi et al., 2019). Along with intellectual capital's role in developing companies' performance, earnings are affected by physical capital, human capital, and structural capital, and profitability and productivity are influenced by physical capital, HC, SC, and relational capital.According to a study (Xu & Li, 2022) and findings (Ardiansari et al., 2021), while intellectual capital simultaneously impacts financial performance, it does not significantly impact market value. Only structural capital, in part, significantly affects the business's financial performance (Ardiansari et al., 2021). The relevance of intellectual capital has come to the attention of corporate management due to the rapid rise of technologically proficient companies in the knowledge-based economy. Therefore, it may be said that intellectual capital (IC) generates wealth and drives financial performance, giving businesses a competitive edge and long-term viability (Xu &Wang, 2018).

The relevance of intellectual capital has come to the attention of corporate management due to the rapid rise of technologically proficient companies in the knowledge-based economy. Therefore, intellectual capital (IC) generates wealth and drives financial performance, giving businesses a competitive edge and long-term viability. New developments show that the

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

relationship between profitability and structural capital efficiency (SCE) in Turkey's industrial sector is moderated by capital efficiency. As R&D expenses rise, so does SCE's effect on profitability. However, it has been discovered that innovation capital efficiency directly impacts the productivity of businesses. The findings also demonstrated the moderating effect of intellectual capital (IC) efficiency components on the profitability-capital employed efficiency (Calisir & Baskak, 2019). While the findings of Asiaei et al. offer some evidence that intellectual capital is indirectly related to organizational performance (Asiaei et al., 2018).

2. Literature review

2.1 Conceptual Introduction intellectual

Information, knowledge, and IT are the most important resources in the age of Industry 4.0 and technology to keep a competitive edge in the developing knowledge-based economy. They are all included in the category of intangible assets, also known as intellectual capital (IC), which is currently the focus of most businesses, including commercial and investing banks, due to their reputation as effective instruments for maintaining business success. Wealth creation in the post-industrial economy mainly depends on intangible assets rather than tangible goods (Asutay & Ubaidillah, 2023). Organizational competitiveness and a knowledge-intensive economy are primarily fuelled by intellectual capital (IC). Despite being regarded as a component of the company's capital, the IC must be more fairly represented in the business's financial statements. A corporation can get a competitive edge over its rivals and create future value via IC (Ahamad et al., 2023).

The ability of the corporation to manage its information and intellectual capital (IC), both of which are crucial areas for most companies, especially for knowledge-intensive businesses, has become crucial considering globalization and big data. All businesses, even those whose primary goal is not necessarily to make a profit, are objective to achieve and maintain good performance, according to Kim et al. Globally, there has been a surge in the number of people who use technology and human capital intensively. Endogenous-driven transformations are typically more likely to cause structural changes in a local labor market. Over the past few decades, the shift to a knowledge-based economy has significantly impacted local employment. This was the reason for improved information and communication technologies (ICT) (Kim et al., 2023). Paul describes IC.

The knowledge of indigenous and local communities is driven into the sphere of individual and private property. It becomes knowledge that can be bought and sold when given commercial value (Paul, 2023). Academic researchers have differing views on the framework, measurement, and definition of intellectual capital. In Literature All knowledge assets and resources connected to the company and anticipated to increase shareholder wealth significantly are referred to as intellectual capital. There is empirical proof that intangible assets like licenses, employee knowledge, and brands economically benefit businesses and economies worldwide. These intangibles are frequently referred to as intellectual capital (IC). (Rieg & Vanini, 2023), Over time, the idea of intellectual capital has undergone significant development. Initially, IC was defined as the difference between a firm's book and market values. IC was referred to as "knowledge that can be converted into value" in a later statement. It has been stated that IC is the ability to generate value in the face of ongoing change. Furthermore, IC was defined as the whole of knowledge applied to company processes to gain a competitive advantage (Obeidat et al.,2017). Alfiero et al. define IC. The complicated organizational process known as "intellectual capital" can be considered as incorporating knowledge management, best practice transfer, and organizational learning. This process can transform employees' skills, knowledge,

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

and expertise into values essential to the business's performance (Alfiero et al., 2021).

2.2 Conceptual Introduction to Sustainable Performance

Most research has shown that intellectual capital (IC) benefits business success. Although this theory has been positively tested in developed nations, recent research has concentrated on the function of intellectual capital in developing nations. Furthermore, earlier research revealed that several aspects of intellectual capital may impact business performance (Xu & Li, 2022). From the resource-based perspective, intellectual capital (IC) is one strategic asset that could add to the firm's worth. Intellectual capital performance is the effectiveness or capacity of the human, structural, and relational capital components of IC to generate value (Rabaya et al., 2020).

Intellectual, not physical capital is a firm's most prized asset. The reason why intellectual capital is considered valuable relates to the fact that intangible assets are more important than tangible assets(Obeidat et al.,2017) As it is observed that managers frequently choose to conceal negative information about their companies' performance while emphasizing positive information, the majority of the literature relating company performance and the disclosure mechanism has primarily focused on financial performance, with attention to voluntary disclosures of environmental, social, and institutional performance (Beretta et al., 2019) Additionally, Villiers & Sharma finding ,. Investor decision-making is improved by giving the market adequate and pertinent information about intellectual capital. By making non-financial information reliable, consistent, and comparable over time and across companies, investors can better judge various investment opportunities' potential rewards and risks (Villiers & Sharma, 2020).

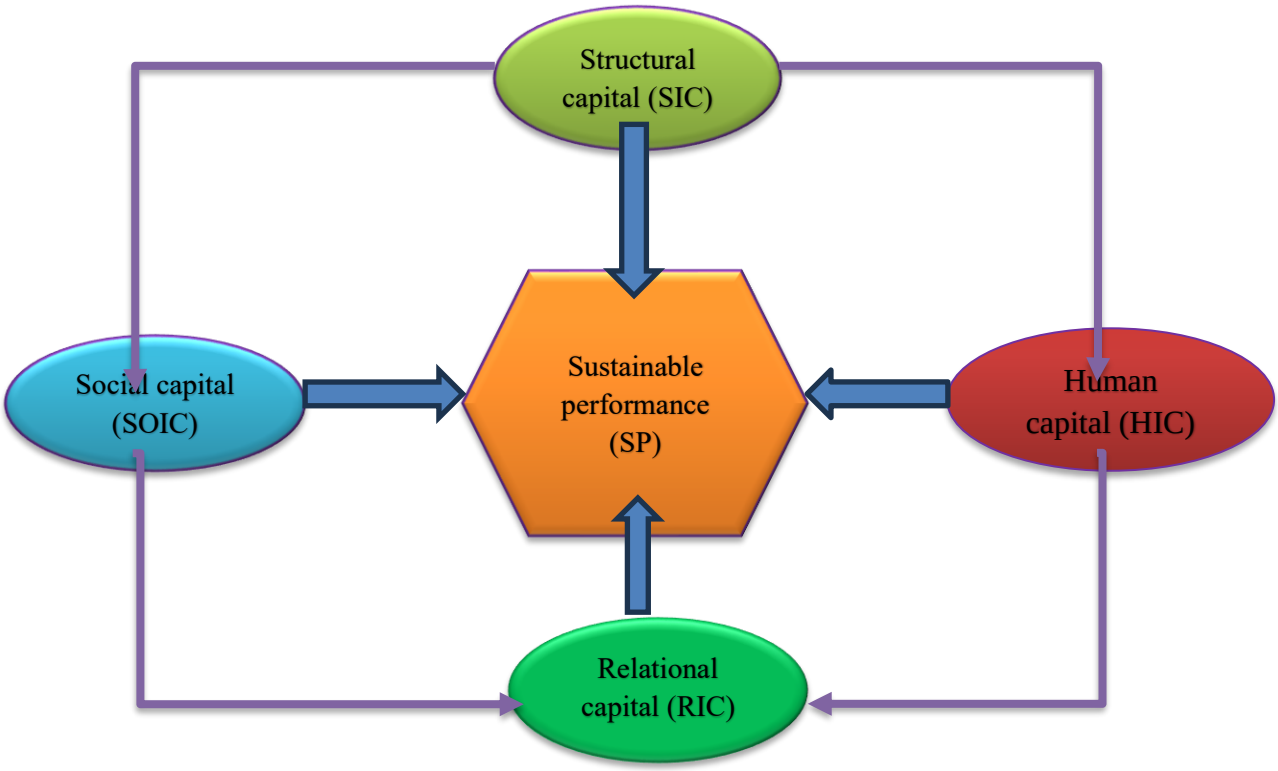
The firms must review their strategy to gain sustainable competitive advantages due to the uncertainty and volatility in competitive markets (Mukaro et al., 2023). Ensuring intergenerational fairness is sustainability's primary goal. Sustainability concepts are commonly accepted because people generally want to retain a quality of life like their parents and want similar opportunities for their offspring. The reasoning also holds for businesses because most managers want their companies to stay profitable or exceed historical levels (Al-Gburi & Wahhab, 2023). As well as A company's performance and ability to innovate depend on its capital structure. It is feasible that investments in innovation and sustainable practices will lead to the introduction of new procedures or goods (Mukaro et al., 2023) (Mukaro et al., 2023). However, managers set goals for using intellectual capital when they oversee and manage an organization's intellectual capital. Therefore, the board of directors in charge should create appropriate policies and plans to ensure managers have the authority to use intellectual capital. Because of this, it is crucial to look closely at the qualities of a board of directors that can directly raise the efficiency of intellectual capital (Saruchi et al., 2019). Furthermore, he believes in Ouni et al. that innovation has replaced intellectual capital as a lever for the profitability and sustainability of the organization due to the evolution of society, the intense presence of technology, the speed at which changes occur in the organizational environment, and the upgrading of the skills of qualified workers (knowledge workers). Several scholars contend that the contribution of intangible capital to value creation surpasses that of tangible capital. Similarly, the perspective of resource-based theory regards intangible resources as the primary factor influencing sustained competitive advantage. (Ouni et al.,2022).

2.3 Types of capital sustainable intellectual

The three elements of sustainable intellectual capital are human capital, which refers to

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

the education, vocational qualification, work-related knowledge and competencies, and entrepreneurial spirit and innovation of a firm's employees. Structural capital refers to the enterprise's intangible infrastructure and intellectual property. Relational capital refers to the value of the relationships with external stakeholders and the firm's reputation. These elements can provide businesses with a competitive advantage. Intellectual capital can result in higher profits, a stronger strategic position for the business, innovative and distinctive technology, meeting standards, improving the firm's credibility and image, improving organizational reputation, lowering costs, boosting customer loyalty, enhancing service quality, and improving effectiveness and performance (Beretta et al., 2019) (Rafiei et al., 2023) (Ardiansari, et al. 2021, 218) (Bayraktaroglu et al., 2019) (Beretta et al., 2019) (Rafiei et al., 2023), Figure 1 below shows the theoretical framework relationship of intellectual capital.



Figer 1: Intellectual Capital Theoretical Framework

2.3. Measurement of Intellectual Capital

According to Javaid et al., When Galbraith first used the phrase "Intellectual Capital" in 1969, he meant the intellectual contribution of a single person. Bell (1997) asserts that a company's resource for gaining a competitive edge is its intellectual capital or IC. Stewart (1997) asserts that knowledge, competency, practice, information, and learning ability are all components of intellectual capital (Javaid et al., 2023); Public provided (VAIC) as a methodology for assessing intellectual capital. The following formula is used in the model citation:

$$VAICTMTM = VAHU + STVA + VACA$$

The parts produced by intellectual potential (VAIP) are separated into real and financial assets, and the parts created by VACA, divided into real and financial assets, are distinguished by the additional value created by VAICTM and advanced Public. VACA and

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

VAIP are outcomes of work or services rendered by employees, and they both depend on hiring and retaining personnel (Xu & Liu, 2019). As discussed by Javaid et al., IC efficiency is measured by the MVAIC model. Unlike the VAIC employed by Public (2000), we incorporate an additional IC component, RC, which is typically disregarded in most prolonged research. So, the following describes the MVAIC framework:

$$VA = OUT - IN,\ CEE = VA/CE,\ HCE = VA/HC,\ SCE = SC/VA,$$
$$RCE = RC/VA,\ ICE = HCE + SCE + RCE,\ MVAIC = ICE + CEE$$

VA stands for value added to the business, OUT for all revenues, IN for all expenses less employee costs, and CEE for capital employed efficiency. Human capital is assessed by total employee spending (HC), while HCE stands for human capital efficiency. CE stands for total assets minus liabilities.

SCE = VA—HC is a measure of the efficiency of structural capital. Relational capital is assessed by selling, marketing, and advertising expenses, or RCE = relational capital efficiency. ICE stands for intellectual capital efficiency (HCE + SCE + RCE); MVAIC stands for modified value-added intellectual coefficient.

The entirety of the company's tangible and intangible assets is known as MVAIC. (Javaid et al., 2023) Regarding measuring the impact of intellectual capital on company performance, Xu and Li used the logged value of EBIT to measure a company's earnings. ROA and ROE are used to measure a company's profitability. ATO measures a company. Logical postulates financial performance (FN) is a reference for investors and management, as used for decision-making. The FN is an important factor for investors to consider. Good financial performance will attract investors to invest in productivity (Xu & Li, 2022).

3. Research Method

3.1 Study Tool Description

Asia Cell is one of the famous telecommunications companies in Iraq. It offers a variety of mobile phones, converging with voice services, internet, text messages and multimedia in addition to smart applications and is able to access the telecommunications sector listed on the Iraq Stock Exchange. The company also advances in Iraq's wide network for trading telecommunications services. One of the reasons for choosing the telecommunications sector in the field of technical research is that this sector relies heavily on the intellectual capital of its components to achieve the research objectives.

Regarding the comprehensive research: The analytical approach was used by reading and analyzing the company's lists for a long period from 2012 to 2023 to learn each part of the intellectual capital to apply the targeted model.

The research hypotheses are tested, as the statistical results were analyzed by linear regression to reach the relationship between the Variables.

3.2 Study of Aims

Today, intellectual capital has become of great importance due to the impact it provides on the success of the company and enhancing its position, competitive value and other advantages. Accordingly, the research aims to ,Knowing the impact of intellectual capital on the sustainable performance of telecommunications corporations. listed on the Iraq Stock Exchange.

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

3.3 Problem and hypotheses of the study

Intellectual capital has become an essential factor in the success and continuity of companies, and practices of sustainable performance and reporting on it have become equal to the importance of financial reporting. Perhaps sustainable performance in its environmental, social, and governance dimensions is affected in one way or another by the ideas of those in charge, their interest in sustainability, and the extent of including it in their strategies and plans. Accordingly, the research problem can be demonstrated through the following questions:

(How do intellectual capital and its various components influence sustainable performance?)

Based on the above question, the current study will test the following hypothesis

(a) Null hypothesis H0: There is no impact relationship between intellectual capital and sustainable performance.

(b) Existence hypothesis H1: There is an influence relationship between intellectual capital and sustainable performance.

4. Results

4.1 Measuring Study Variables

1- Dependent variables: The company's ROA and ROE determine its profitability. ATO is a metric used to gauge productivity.

2- To measure IC, one uses the MVAIC model. There are three steps in the MVAIC computation. First, a company's Value Added (VA) is calculated using the formula below:

1- VA = OUT – IN

where OUT is a firm's total revenue, and IN is total expenses, including employee expenditures.

Compute IC efficiency (ICE) in the second phase, which is the total of SCE, RCE, and HCE. HCE measures the amount of value created by investing money in personnel. SCE displays the amount of capital created by SC. Pulic (2000) noted a symmetric negative correlation between SC and HC. RCE shows the value produced by each unit of RC invested. These are the results of the calculations:

2- ICE = HCE + SCE + RCE

3- CEE = VA/CE

4- HCE = VA/HC

5- SCE = SC/VA

6- RCE = RC/VA

Where Intellectual capital efficiency's (ICE) connection to human capital (HC), HCE human capital efficiency, SCE structural capital efficiency, and RCE relational capital efficiency, HC is employees' salaries and wages, and RC is marketing, selling and advertising expenses."

7- MVAIC = ICE + CEE

The MVAIC indicates the efficiency of corporate value generation. The more effectively the company uses IC resources, the higher the MVAIC.

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

Table 1. Intellectual capital measurement model components and performance indicators, study sample

year	VA	ICE	CEE	HCE	SCE	RCE	MVAIC
2012	871350918	10.70367362	0.4595	9.3750	1.2650	0.0637	11.1632
2013	755482	8.382830684	0.3901	7.0025	1.3137	0.0666	8.7729
2014	562497	7.737083964	0.2998	5.4213	2.2334	0.0824	8.0369
2015	245316	7.107117293	0.1271	2.4456	4.4765	0.1850	7.2342
2016	193297	6.994676508	0.0987	1.9331	4.8680	0.1936	7.0933
2017	211170	6.059659172	0.1251	2.2082	3.7117	0.1398	6.1848
2018	353875	5.429793153	0.2343	3.5549	1.7707	0.1042	5.6641
2019	332644	4.920652981	0.2424	3.1740	1.6079	0.1387	5.1631
2020	330781	5.811963833	0.2559	3.1688	2.5398	0.1033	6.0678
2021	494117	6.000189712	0.3504	4.2831	1.6659	0.0512	6.3506
2022	437685	5.363323098	0.3206	3.5500	1.7236	0.0898	5.6839
2023	553096	5.667225013	0.3931	4.2617	1.3389	0.0666	6.0603

Table 1, which shows the measurement of the impact of intellectual capital from 2012 to 2023 according to the MVAIC model, clearly shows that the efficiency of the value generated from intellectual capital with its multiple components is in addition to the added value. We also see that 2012 is the year in which the highest value is generated according to the model.

Table 2: Performance indicators, study sample

Year	ROA	ROE
2012	0.2340	0.3492
2013	0.1935	0.2998
2014	0.0956	0.1837
2015	0.0125	0.0225
2016	0.0087	0.0151
2017	0.0120	0.0228
2018	0.0495	0.0992
2019	0.0593	0.1255
2020	0.0715	0.1884

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

2021	0.1263	0.2370
2022	0.1127	0.1870
2023	0.1601	0.2500

Table 2 shows the performance according to the return on assets and return on equity index. We note that 2012, 2013, and 2023 are the years with the highest return on assets, and in these years, we also find the highest value generated from intellectual capital. As for the second performance indicator, return on equity and property rights, we also see that 2012, 2012, and 2023 are the highest.

4.2 Results and Testing of Study Hypotheses

Linear regression was used to test the study hypothesis.

Table 3: Linear regression test

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.091-	.078		-1.174-	.268			
	MVAIC	.027	.011	.613	2.454	.034	.613	.613	.613
a. Dependent Variable: ROA									

The significance of the relationship between intellectual capital and sustainable performance utilization (ROA) was examined using a regression model. The results indicated that this relationship is statistically significant, with a significance level of 0.034 below the threshold of 0.05. The table presents this information, where MVAIC (intellectual capital) is treated as the independent variable and sustainable performance is the dependent variable. Given the observed correlations between intellectual capital and sustainable performance, the dependent variable is considered the outcome or response variable in the research study.

$\hat{Y}$=.091-0. 27 MVAIC.

Table 3: Linear regression test

Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.074-	.126		-.588-	.570			

Technium Social Sciences Journal
Vol. 67, 99-109, January, 2025
ISSN: 2668-7798
www.techniumscience.com

	MVAIC	.034	.018	.524	1.946	.080	.524	.524	.524
a. Dependent Variable: ROE									

Ŷ=.074-0. 034 MVAIC.

The significance of the relationship between intellectual capital and sustainable performance utilization (ROE) was examined using a regression model. The results indicated that this relationship is statistically significant, with a significance level of 0.080 below the threshold of 0.05. The table presents this information, where MVAIC (intellectual capital) is treated as the independent variable and sustainable performance is the dependent variable. The dependent variable is considered the outcome or response variable in the research study. Given the observed Correlations between intellectual capital and sustainable performance

5. Conclusion

Upon analyzing both theoretical and practical elements, it There is a great importance and role for intellectual capital in sustaining the performance of the company, represented by maximizing its value in the short and medium term, which can be seen in the company's private revenues, in addition to maximizing the company's market share by increasing the number of subscribers and maintaining them to sustain the competitive advantage. Consequently, reporting intellectual capital within the company's integrated reporting, including non-financial information, has become necessary due to its importance to stakeholders. In addition, intellectual capital has become an essential part of the strategy of successful companies. As we have explained in our research, intellectual capital's components affect financial and non-financial sustainable performance. The existence of a relationship of trust and loyalty from customers towards the company is an important factor for its continuity. Also, the existence of human resources with innovative ideas to develop the services or goods provided will inevitably contribute to maximizing its performance and sustainability. Accordingly, we suggest that companies seek to show intellectual capital in its various forms within their annual reports.

6. References

[1] Abhayawansa, Subhash, and James Guthrie. (2010)"Intellectual capital and the capital market: a review and synthesis." Journal of Human Resource Costing & Accounting, pp. 196-226. https://doi.org/10.1108/14013381011095472

[2] Ahamad, Shamsuddin, Hamdan Amer Ali Al Jaifi , and Kizito Uyi Ehigiamusoe (2023). "Impact of Intellectual Capital on Microfinance Institutions' efficiency: the Moderating Role of External Governance." Journal of the Knowledge Economy, 14 ed.: 691–717. https://doi.org/10.1007/s13132-022-00937-8

[3] Alfiero , Simona, Valerio Brescia, and Fabrizio Ber. (2021)"Correction to: Intellectual capital-based performance improvement: a study in the health care sector." BMC Health Services Research, , 21 ed. https://doi.org/10.1186/s12913-021-06087-y

[4] Al-Gburi, Hayder Jameel Ahmed, and Wahhab, Asaad Mohammed Ali. (2023)"Applying the Financial Sustainability Standard and its Impact on the Bank's Value: Evidence from the Iraqi Market." Technium Sustainability, 4 ed.: 31-44. http://dx.doi.org/10.47577/sustainability.v4i.9631

[5] Ardiansari, Anindya, Siti Ridloah, Irene Rini Demi Pangestuti, and Pipit Indriyani. (2021) "The Influence of Intellectual Capital on the Company's Financial Performance and Market Value." Universal Journal of Accounting and Finance, 9 ed.: 217-225. https://doi.org/10.13189/ujaf.2021.090211

[6] Asiaei, K., Jusoh, R., & Bontis, N. (2018). Intellectual capital and performance measurement systems in Iran. Journal of Intellectual Capital, 19(2), 294-320. https://doi.org/10.1108/JIC-11-2016-0125

[7] Bayraktaroglu, A.E., Calisir, F. and Baskak, M. (2019), "Intellectual capital and firm performance: an extended VAIC model", Journal of Intellectual Capital, Vol. 20 No. 3, pp. 406-425. https://doi.org/10.1108/JIC-12-2017-0184

[8] Benevene, P., E. Kong, B. Barbieri, and M. Lucchesi. (2017) "Representation of intellectual capital's components amongst Italian social enterprises"." Journal of Intellectual Capital,Vol. 18 ed.: pp. 564-587. , https://doi.org/10.1108/JIC-12-2016-0127

[9] Beretta, Valentina, Chiara Demartini , and Sara Tru. (2019) "Does environmental, social and governance performance influence intellectual capital disclosure tone in integrated reporting? ,, No. 1,." Journal of Intellectual Capital, Vol. 20 ed.: pp. 100-124. https://doi.org/10.1108/JIC-02-2018-0049

[10] Dumay , J., and L. Cai. (2014) ""A review and critique of content analysis as a methodology for inquiring into IC disclosure"." Journal of Intellectual Capital,Vol. 15 ed.: pp. 264-290. http://dx.doi.org/10.1108/JIC-01-2014-0010

[11] Dumay, J., and J. Guthrie. (2017) ""Involuntary disclosure of intellectual capital: is it relevant?"." Journal of Intellectual Capital, Vol. 18 ed.: pp. 29-44. https://doi.org/10.1108/JIC-10-2016-0102

[12] Hidalgo, Ruth L. , Emma Garcı´a- Meca, and Isabel Martınez. (2011)"Corporate Governance and Intellectual Capital Disclosure." J Bus Ethics,100 ed.: 483–495. https://doi.org/1007/s10551-010-0692-x

[13] Javaid, Hafiz Mustansar , Qurat Ul Ain, and Rita D'Ecclesia. (2023) "Female directors in the boardroom and intellectual capital performance: Does the "critical mass" matter?" Financial Innovation,9 ed. https://doi.org/10.1186/s40854-023-00476-4

[14] Kim, Keungoui, Dieter F. Kogler , Changjun Lee, and Taewon Kang.(2023)"Changes in regional knowledge bases and its effect on local labour markets in the midst of transition: Evidence from France over 1985–2015." Applied Spatial Analysis and Policy,16 ed.: 1255–1276,https://doi.org/10.1007/s12061-022-09444-4

[15] Mehmet, Asutay, and Ubaidillah. (2023) "Examining the Impact of Intellectual Capital Performance on Financial Performance in Islamic Banks." journal of the Knowledge Economy, https://doi.org/10.1007/s13132-023-01114-1

[16] Mukaro, Charlie Tatenda, Abraham Deka , and Sylvester Rukani. (2023)"The influence of intellectual capital on organizational performance." Future Business Journal, 9 ed. https://doi.org/10.1057/s41310-022-00154-4

[17] Obeidat, Bader Yousef , Ayman Bahjat Abdallah, Noor Osama Aqqad, Abdel Hakeem Oqlah M. Akhoershiedah, and Mahmoud Maqableh. (2017) "The Effect of Intellectual Capital on Organizational Performance: The Mediating Role of Knowledge Sharing." Communications and Network, , 9 ed.: 1-27. https://doi.org/10.4236/cn.2017.91001

[18] olla , Filippo, Nicola Raimo , Arcangelo Marrone, and Michele Rubino. (2020) "The role of board of directors in intellectual capital disclosure after the advent of integrated reporting." Corp Soc Responsib Environ Manag. 1-13. https://doi.org/10.1002/csr.1957

[19] Paul, Jacqueline. (2023) "Traditional Knowledge Protection and Digitization: A Critical Decolonial Discourse Analysis." Int J Semiot Law,36 ed.: 2133–2156. https://doi.org/10.1007/s11196-023-09989-8

[20] Rabaya, Abdullah Jihad Rasmi, Norman Mohd Saleh, and Noradiva Hamzah. (2020) "Intellectual Capital Performance and Firm Value: The Effect of MFRS 139." The South East Asian Journal of Management, Vol. 14 ed.: pp. 1-22. https://doi.org/10.21002/seam.v14i1.11851

[21] Rabaya, Abdullah Jihad Rasmi; Saleh, Norman Mohd; and Hamzah, Noradiva (2020) "Intellectual Capital Performance and Firm Value: The Effect of MFRS 139," The South East Asian Journal of Management: Vol. 14 : No. 1 , Article 1. https://doi.org/10.21002/seam.v14i1.11851

[22] Rafiei, Shoaib, Mohammad Mehrtak, and Mohammad Amerzad. (2023)"The relationship between succession and intellectual capital with entrepreneurship in hospitals." BMC Health Services Research, , 23 ed. https://doi.org/10.1186/s12913-023-09435-2

[23] Rieg, Robert, and Ute Vanini. (2023)"Value relevance of voluntary intellectual capital disclosure: a meta analysis." Review of Managerial science,17 ed.: 2587–2631. https://doi.org/10.1007/s11846-023-00630-3

[24] Saruchi, Sarah Athirah , Nor Aiza Mohd Zamil, Rohaida Basiruddin , and Nor Faezah Ghazi Ahmad. (2019) "Examining the Impact of Corporate Governance on Intellectual Capital: Empirical Evidence of Islamic Banks." International Journal of Academic Research in Accounting, Finance and Management Sciences, 9 ed.: 104-117.http://dx.doi.org/10.6007/IJARAFMS/v9-i3/6345

[25] Villiers , Charl de, and Umesh Sharma(2020). "A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting." Critical Perspectives on Accounting, July, Volume 70 ed. https://doi.org/10.1016/j.cpa.2017.05.003

[26] Xu , Jian , and Jingsuo Li. (2022) "The interrelationship between intellectual capital and firm performance: evidence from China's manufacturing sector." Journal of Intellectual Capital, 313-341. https://doi.org/10.1108/JIC-08-2019-0189

[27] Xu , Jian, and Binghan Wang. (2018)"Intellectual Capital, Financial Performance and Companies' Sustainable Growth: Evidence from the Korean Manufacturing Industry." 10 ed.: 1-15. https://doi.org/10.3390/su10124651

[28] Xu , Xin-long, and Cheng Kun Liu. (2019)"How to keep renewable energy enterprises to reach economic sustainable performance: from the views of intellectual capital and life cycle." Sustainability and Society, 9 ed. https://doi.org/10.1186/s13705-019-0187-2