The Impact of Intellectual Capital on Enterprise Performance in Saudi Arabia: Literature Review of Empirical Research

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Abstract

Physical assets such as buildings, plants, and so on, are important factors in the production era, but their importance has decreased with increased the importance of intangible assets in the knowledge era. In the knowledge-based economy, intellectual capital (IC) is one of the most important assets in an enterprise for achieving sustainable competitive advantages. As a result, research on the correlation between IC and enterprise performance (EP) and its role in achieving competitive advantage has become one of the most controversial topics in accounting globally. The findings of the empirical research have been inconsistent; there is no consensus on the effect of IC on the enterprise's performance due to the different definitions and methods of measuring IC used among researchers. The paper focuses on reviewing empirical research about the effect of IC on EP in Saudi Arabia, aiming at a presentation of recent developments and a discussion of the direction for future research. This paper is the first study to review empirical research on IC and EP in the Saudi context.

Keywords: intellectual capital, performance, literature review, Saudi Arabia

1. Introduction

The success of business organizations has depended on physical assets; the main factor of production was land in the agricultural economy and capital in the industrial economy. However, this situation began to change with the emergence of the knowledge economy, when the main factor in production became intangible assets such as knowledge, employee skills, experience, systems, and brands rather than land, machinery, and financial assets. Intellectual capital (IC) has become the basis for the success and development of organizations because it leads to achieving added value to their products and enhancing their competitive position (Alsakny, 2008). IC has become part of a company's strategic sources, and in the knowledge economy, it is considered an important part of the value creation process of an enterprise (Babi, Niazy, Talebi, & Mohamade, 2016). In the past, the largest companies in the world were either industrial or oil companies, but the situation is now different, as a significant number of the largest companies are intellectual companies such as Alphabet (Salman, 2019). The knowledge economy is a natural result of the development of human society, which has been linked to three stages: the first stage, which is the agricultural revolution before the 18th century; the second stage, which is the industrial revolution from the beginning of the 19th century, and finally the knowledge revolution from the 1960s to the present day. The knowledge revolution has differed from previous revolutions in that the pattern of scientific and technical production moved from the stage of individual creativity and production to collective creativity and production (Almojel, 2022). The knowledge economy is an open, global economy that encourages investment in knowledge and supports innovation. Knowledge cannot be monopolized in a specific place but rather it is exchanged and shared everywhere; the influence of geographical location and borders has decreased. In contrast, the role of knowledge and information has increased. The knowledge economy is based on four pillars: The first, innovation, is an effective system of research and development that aims to continuously produce new products and adapt them to local needs. Innovation represents an important determinant of the success of the knowledge economy, and therefore companies and countries that desire high productivity and sustainable growth should focus on investing in it. The second, education, works to support IC and the creation of a qualified workforce through curricula and continuing education and training programs. The third, technological infrastructure, works to facilitate the production and distribution of knowledge and information and achieve

high-productivity returns for projects. The fourth, good governance, is the legal and institutional framework and the fair competitive economic climate suitable for increasing the productivity and growth of institutions (Al-najjar, 2024).

As we move to an economy based on knowledge and technology, it has become necessary to invest in human resources, information technology, creativity, and innovation to maintain the enterprise's competitive position and to ensure its survival (Canibano, Garcia-Ayuso, & Paloma Sanchez, 2000). Enterprises must understand IC so that they can manage it effectively (Luthy,1998); it is an essential asset for success in the current economic environment, not only in knowledge-based enterprises but in all types of enterprises. The primary driver of the success and growth of enterprises has become the human element, through which knowledge is transformed into value represented in services or products. Therefore, enterprises have sought to pay attention to it and provide an appropriate environment for creativity and innovation (Alsakny, 2008). Despite the shift to the knowledge economy, the accounting framework and financial reporting have not changed sufficiently to include IC (Babi et al., 2016). The conventional accounting model emphasizes physical and financial assets. The purpose of preparing financial reports is to provide information to beneficiaries about the enterprise's performance and financial condition, which helps them make economic decisions. The proportional reduction of IC accounting recognition means that financial data have lost some value to users (Zéghal & Maaloul, 2010). This lack of information has several consequences for enterprises and investors because it may direct them to higher costs of capital and interest rates and may also lead to wider information asymmetries between managers and shareholders (Minovski & Jancevska, 2018). One of the challenges facing accountants is the classification and measurement of IC (Alsakny, 2008) due to its intangible nature (Chang & Hsieh, 2011). Scholars have done much empirical research on the impact of IC on enterprise performance (EP) and its role in the creation of economic wealth in the United Kingdom, South Africa, Greece, and so on. There is no assent about the influence of IC on EP and its mechanisms due to differences in the definition of IC and the ways it is measured (Si, 2019).

At the local level, it can be seen that an increase in studies in proportion to government spending on research and development and the tremendous efforts made by Saudi Arabia to achieve Vision 2030. IC is the basis for achieving Saudi Vision 2030, which launched in Saudi Arabia in 2016. Vision 2030 is a comprehensive social, economic, and political plan that aims to raise the national economy to the ranks of major economic countries by shifting from a traditional oil-based economy to a knowledge economy based on knowledge and innovation. One of its goals is to raise the Social Capital Index issued by the World Bank ("Vision 2030," 2016). Also, one of its programs is the Human Capability Development Program ("Human Capability Development Program Saudi Vision 2030," 2016). In 2023, non-oil activities recorded their highest level in history at 50% of the Saudi gross domestic product (Almenshawy, 2024). This increase is a result of the great efforts made by Saudi Arabia to diversify sources of income, and it is also evidence of the success the Saudi Arabia in implementing the vision programs.

This paper presents a review of published empirical research related to the relationship between IC and EP in Saudi Arabia. The structure of this review is organized as follows: Section 1 is the introduction. Section 2 reviews the theoretical basis of IC. Section 3 describes the correlation between IC and EP by reference to the related empirical research in the Saudi context. Finally, Section 4 provides a conclusion and suggestions.

2. Theoretical Basis of Intellectual Capital

Researchers in many countries have produced theoretical research related to IC. This section will briefly review the most prominent findings mentioned in the literature about IC regarding the definition of IC, the components of IC, and the measuring method for IC.

2.1 Definition of Intellectual Capital

Published literature indicates that there is no common definition of IC. Therefore, the author will present several viewpoints that provide a general understanding of IC. The concept arose through knowledge workers; Peter Drucker presented this concept in his book "The Landmarks of Tomorrow" in 1959, where he predicted that the most valuable assets in the 21st century would be knowledge workers and the value of products obtained from them (Salman, 2019). The American economist Calbraith was the first to coin the term "intellectual capital" in 1969 and indicated that it is a dynamic process for generating knowledge and a road to reaching aims (Si, 2019). Standard 38, issued by The International Accounting Standards Board (1998), defined an intangible asset as an identifiable nonfinancial asset that does not have a physical substance. Luthy (1998) defined IC as all knowledge that is useful in any form in the organization and not only data or information in files and databases. IC is the knowledge present in any organization that is the basis of its success (Minovski & Jancevska, 2018). (Maditinos, Chatzoudes, Tsairidis, & Theriou, 2011) argued that IC is the gap observed between the market value and the book value. Alsakny (2008) defined IC as the knowledge assets of enterprises that are involved effectively in the generation of physical assets. According to Sulphey and Naushad (2019), IC refers to the intangible assets and intellectual property rights of an enterprise. Based on the

above, IC can be defined as the knowledge that contributes to improving performance and achieving competitive advantage for an organization.

2.2 Components of Intellectual Capital

Components of IC differ among researchers due to the different points of view on its definition. The most used literature classification emphasizes two or three components (Dzenopoljac, Yaacoub, Elkanj, & Bontis, 2017). Pulic (1998) selected two main components of IC: human capital (HC) and structural capital (SC). (Bontis ,1998; Roos, Bainbridge, & Jacobsen, 2001) identified three main components for IC: human capital (HC), structural capital (SC), and customer capital (CC). HC is the skills, experience, and expertise of the employee (Sulphey & Naushad, 2019). SC is the assets that remain with an enterprise whether employees leave or not (Sulphey & Naushad, 2019). Finally, CC is an asset acquired through customers interactions with an enterprise (Ferreira & Martinez, 2011).

2.3 The Measuring Method of Intellectual Capital

An organization's capital includes any tangible assets, such as property, plants, and equipment, that are expected to contribute to future profits and are therefore measured in the organization's accounts. Also, included are assets expected to contribute to profits, such as the skills and knowledge of the workforce, but due to their intangible nature, it is difficult to obtain agreement on how to calculate these components for internal users (company management) and external users (stakeholders) (Hunter, webster, & wyatt, 2005). To manage IC efficiently, its components need to be identified, understood, and properly measured (Dzenopoljac et al., 2017). Accountants face basic challenges in measuring knowledge assets because they are immaterial, indefinable, and not directly measurable (Alsakny, 2008). There is a large amount of research on IC and a variety of approaches (Osinski, Selig, Matos, & Roman,2017); several methods have been presented in studies, but the reliability of the methods depends on industry characteristics and the objectivity of the information (Chang & Hsieh, 2011). The measuring methods can be separated into two groups: financial and nonfinancial. In the first group comprises financial measurement methods such as economic value added, knowledge capital earning, market-to-book value, human resource costing and accounting, and the value-added intellectual coefficient (VAIC), developed by Pulic (1998) (Alsakny,2008). The second group comprises nonfinancial measurement methods such as a balanced scorecard (Dzenopoljac et al., 2017). Most studies used the VAIC model, which measures the value added created by a business along with the contributions of each asset class: capital employed, human capital, and structural capital (Nadeem, Gan& Nguyen, 2017). The VAIC model measures IC efficiency using financial reporting data that are characterized by objectivity and reliability because they are audited by professional accountants (Bayraktaroglu, Calisir & Baskak, 2019; Chang & Hsieh, 2011; Pulic 1998, 2004).

3. A Summary of the Empirical Studies on the Effect of Intellectual Capital on Enterprise Performance

Globally, empirical research on IC began in the early 2000s. In Saudi Arabia, it began later, but it has increased in recent years with more awareness of the importance of IC in the current economy and its impact on EP. Researchers selected data from different industries to conduct studies to explore the correlation between IC and EP. Although they used different measurement methods to measure IC, most studies used the VAIC model. Several indicators have also been used to measure EP. For example, financial performance (FP) is often measured by return on assets (ROA) and return on equity (ROE) for profitability. ROA is the ratio of the net income (less preference dividends) divided by the book value of total assets (Firer & Williams, 2003). ROE measures a company's efficiency in creating profits from each unit of equity (Chen, Cheng& Hwang, 2005). Market performance is measured by: 1) Tobin's Q (TQ) is a ratio between the market value of a company's assets and its replacement value (Smriti & Das, 2018); 2) market-to-book ratio is a ratio of the total market capitalization (share price times the number of outstanding common shares) to the book value of net assets (Firer & Williams, 2003). Researchers have reached different results, and in the next part, the studies will be classified according to these results.

Most researchers have found that the elements of IC significantly correlate with EP. Al-Musali and Ismail (2014) used VAIC as the proxy of IC to examine the influence of IC on the FP of 11 commercial banks listed on the Saudi Stock Exchange (Tadawul) for 2008–2010. They point out that intellectual assets and intangibles have an important role in the value creation of an organization, so it is important to explore the impact of IC on bank performance. They concluded that the IC performance of Saudi banks is low with a positive significant correlation of human capital efficiency (HCE) with FP measured by ROA and ROE. Also, there was a significant positive correlation of capital-employed efficiency (CEE) with FP measured by ROE, although their analysis failed to note any significant correlation between structural capital efficiency (SCE) and FP.

A study by (Razak, Mohammad, & Tobiagi, 2016) used the VAIC model to conduct an empirical examination of the Saudi banking sector's annual reporting of IC in terms of content and to measure the IC performance of 12 commercial

banks listed on Tadawul in 2014. First, the findings showed that all Saudi banks listed on Tadawul disclosed IC information in their 2014 annual reports; this reveals an awareness of the importance of IC disclosers. Second, the HCE of banks is higher than SCE and CEE. (Hamdan, Buallay, & Alareeni, 2017) used the VAIC model to test the impact of corporate governance on the interaction between IC efficiency and financial, operational, and market performance of all firms—171 firms from 15 sectors—listed on Tadawul for the period 2012–2014. First, the results showed that corporate governance has a positive impact on the relationship between IC and financial, operational, and market performance. Second, SCE and CEE have a positive impact on operational performance (ROE), whereas only CEE has a positive impact on financial performance (ROA). Finally, IC components have a positive impact on market performance (TQ). Buallay (2017) used the VAIC method to evaluate the level of IC and to measure the impact of IC components on a firm's operational, financial, and market performance using ROA, ROE, and TQ, respectively of all 171 firms listed on Tadawul for the period 2012–2014. First, the results revealed that there is no significant impact of IC components on operational performance (ROA). Second, there is a positive impact of HCE on financial performance (ROE). Finally, there is a negative impact of SCE on market performance (TQ), whereas there is a positive impact of CEE on market performance (TQ).

Sulphey and Naushad (2019) used the VAIC method to conduct an empirical investigation of all the 12 Saudi banks listed on Tadawul to determine the position of IC of Saudi banks and examine the performance of Islamic banks for the period 2013–2016. They argued that organizations that manage IC will achieve a competitive advantage and deliver quality services to stakeholders. They observed a positive relationship between all three components of VAIC and FP measured by ROA and a positive relationship between CEE and FP measured by ROE. Second, Saudi banks achieved the required value of HC compared to other capital components. Finally, Islamic banks were more efficient in generating value from their IC compared to conventional banks. Naushad (2019) used the VAIC method to test the impact of IC on the FP of Sharia-compliant banks in Saudi Arabia for the period 2013–2018. The results showed that there is a positive correlation between overall IC efficiency and the FP measured by ROA and ROE. Also, HCE, SCE, and CEE have a significant impact on the FP measured by ROA but fail to have a significant impact on the FP measured by ROE. Obaid (2020) used a survey to study the relationship between the disclosure of IC in financial reports and the improvement of the FP of Saudi firms listed on Tadawul for 2018. The findings showed a positive relationship between the disclosure of intellectual capital in financial reports and the improvement of FP and a positive relationship between the disclosure of IC components (HCE, SCE, and CEE) in financial reports and the improvement of FP. Alturiqi and Halioui (2020) conducted an empirical investigation using the VAIC model to examine the relationship between IC and financial and market performance of 25 Saudi firms belonging to four sectors (telecommunication services, diversified financials, banks, and health care equipment and services) listed on Tadawul for the period 2015–2018. The results showed that overall IC efficiency has a positive influence on financial performance. Also, each of (HCE, SCE, and CEE) has a positive influence on financial performance, whereas only HCE and SCE have a positive influence on market performance.

Alharbi (2023) used the VAIC model to investigate the effect of intellectual capital and its components on the firms' performance measured by ROA, ROE, assets turnover, and price-to-book ratio of 30 Saudi firms for the period 2017–2021. The results revealed that IC is positively associated with the firms' performance measured by ROA and ROE. Sayed and Nefzi (2024) selected 10 major Saudi banks to explore the effect of IC and its components on their FP for the period 2012–2022. They used the VAIC model to measure IC and indicators such as ROE and net profit margin to measure FP. The results indicated that IC significantly enhances the performance of banks in Saudi Arabia. Also, HC efficiency and capital employed efficiency have a positive impact on performance in both performance indicators used, whereas SCE has a mixed effect.

In contrast, a few researchers have found that CEE has the most effect on performance compared to HCE and SCE. For example, Ahmed (2021) selected 40 companies belonging to three sectors—banking, industry, and trade—listed on Tadawul, to assess the importance of VAIC as a proposed approach for accounting measurement and disclosure of intellectual assets in the Saudi environment by conducting an experimental test of its effect on the firm market value (FMV) and ROE for the period 2015–2019. The results revealed that there is a significant positive impact of CEE followed by HCE on FMV and ROE, whereas there is a negative effect of SCE. Chiad (2022) used the VAIC model to investigate the effect of IC and its components on the FP of all 12 Saudi banks listed on Tadawul for the period 2015–2018. The main finding showed a positive relationship between the components of IC and the FP of Saudi banks. The CEE affecting banking performance most compared to HCE and SCE. These results mean that physical and financial assets have the greatest impact on performance compared to IC.

It can be observed that the vast majority of local studies have indicated that elements of IC are significantly associated with EP, and few researchers have found the opposite. The difference in results among studies is not surprising for

several reasons: 1) The difference in the methods used to measure IC, where the results differ depending on the method used. Al-Musali and Ismail and others used the VAIC model, whereas Obaid used a survey to measure IC. 2) The indicators used to measure the enterprise's performance differed. Most researchers used ROA and ROE to measure the EP, and it is known that each indicator reflects an aspect of the EP and is not a comprehensive measure. 3) The research was conducted during different time periods from 2008 to 2022, and the impact of the 2008 global financial crisis, considered the worst since the 1929 depression, and COVID-19 pandemic in 2019 likely affected any results. 4) There was a difference in the sectors studied. Briefly: The results cannot be generalized due to the different methods of measuring IC, the indicators used to measure the EP, the periods and economic conditions, and the sectors studied.

Table 1. General characteristics of the reviewed studies

Author and year	Sample		Method measuring of IC
	Period	Sector	
Al-Musali and Ismail (2014)	2008–2010	Banks	VAIC
Razak et al. (2016)	2014	Banks	VAIC
Hamdan et al. (2017)	2012–2014	All sectors	VAIC
Buallay (2017)	2012–2014	All sectors	VAIC
Sulphey and Naushad (2019)	2013–2016	Banks	VAIC
Naushad (2019)	2013–2018	Sharia-compliant banks	VAIC
Obaid (2020)	2018	Not specified	Survey
Alturiqi and Halioui (2020)	2015–2018	Telecommunication services, diversified financials, banks, and health care equipment and services	VAIC
Ahmed (2021)	2015–2019	Banking, industry, trade	VAIC
Chiad (2022)	2015–2018	Banks	VAIC
Alharbi (2023)	2017–-2021	All sectors	VAIC
Sayed and Nefzi (2024)	2012–2022	Banks	VAIC

Table 1 shows the general characteristics of the reviewed empirical research on the effect of IC on EP in Saudi Arabia. Studies that used the VAIC model focused on the banking sector, which is one of the most appropriate sectors for studying IC because it is a non-oil sector that is knowledge-based and provides data that can be analyzed and measured.

4. Conclusion and Suggestions

Intellectual capital (IC) has become an important tool to enhance the strength of organizations and increase competition among them. Enterprises must constantly improve their ability to create value to maintain their competitive advantage. This paper has provided a review of the research on the impact of IC on EP in Saudi Arabia. The amount of empirical research on the relationship between IC and EP has increased in recent years as a result of awareness of the importance of IC in the current economic environment. Empirical evidence has emphasized that IC is more influential on EP than physical capital; however, a few researchers have reached the opposite conclusion due to the use of different methods, sectors, periods, and economic conditions. The author presents suggestions and calls for further research regarding the following aspects:1) Intellectual capital must be understood to properly manage it. To accomplish that there should be cooperation among the capital market authority, practitioners, and academics through conducting workshops and courses. 2) Academics should conduct more research to include several knowledge-based sectors for comparison among them. Half of the research conducted has focused on the banking sector only. 3) Combining financial and nonfinancial measures will give a comprehensive picture of EP; existing studies have focused on financial measures. 4) It is important to conduct more empirical research using other methods to measure IC because results vary depending on the method used. Most current empirical research has used the VAIC method, although there are many methods for measuring IC. 5) It is important to conduct research focusing on the recent past (2020–2023) to show more accurate and convincing results due to awareness of the importance of IC on EP in the knowledge-based economy. Most studies conducted have focused on the years between 2008 and 2018.

References

Ahmed, E. M.R. (2021). Relevance of using the value added intellectual capital as an approach for accounting measurement and disclosure to enhance the quality of financial report and its impact on the firm market value An applied study on listed companies in Saudi stock Market. *Accounting and Auditing Journal of the Association of Arab Universities, 3*, 355-423. Retrieved from https://naus.journals.ekb.eg/article_207902_127495125f8f592100fc2a3fd562b370.pdf

Al-Musali, M. A. K., & Ismail, K. N. I. K. (2014). Intellectual Capital and its Effect on Financial Performance of Banks: Evidence from Saudi Arabia. *Procedia - Social and Behavioral Sciences, 164*, 20-207. https://doi.org/10.1016/j.sbspro.2014.11.068

Alsakny, S.A.K. (2008). Intellectual capital and the challenges facing accountants in measuring it. *Journal of Baghdad College of Economic sciences University, 18*, 123-142. Retrieved from https://www.iasj.net/iasj/article/52819

Alturiqi, A., & Halioui, K. (2020). The impact of intellectual capital on firms' performance: Evidence from Saudi Arabia. *Accounting and Finance Research, 9*(4), 44-69. https://doi.org/10.5430/afr.v9n4p44

Alharbi, A. A. (2023). The Impact of Intellectual Capital on Firm Performance: A Study of Firms in Saudi Arabia, *Scientific Journal for Financial and Commercial Studies and Research, 4*(1)1, 375-405. https://doi.org/10.21608/cfdj.2023.258048

Almenshawy, A. (2024, March 20). Non-oil activities in Saudi Arabia.. How did they reach 50% of the gross domestic product?. *Alarabiya.* Retrieved from https://www.alarabiya.net/aswaq/opinions/2024/03/20/%D8%A7%D9%84%D8%A3%D9%86%D8%B4%D8%B7%D8%A9-%D8%BA%D9%8A%D8%B1-%D8%A7%D9%84%D9%81%D8%B7%D9%8A%D8%A9-%D9%81%D9%8A-%D8%A7%D9%84%D8%B3%D8%B9%D9%88%D8%AF%D9%8A%D8%A9-%D9%83%D9%8A%D9%81-%D9%88%D8%B5%D9%84%D8%AA-50-%D9%85%D9%86-%D8%A7%D9%84%D9%86%D8%A7%D8%AA%D8%AC-%D8%A7%D9%84%D9%85%D8%AD%D9%84%D9%8A%D8%9F

Almojel, S. (2022, March1). The Kingdom and the knowledge economy. *Alriyadh.* Retrieved from https://www.alriyadh.com/1937671.

Alnajjar, W.A.S.A. (2024). The Role of the Knowledge Economy in Achieving Sustainable Development in the Kingdom of Saudi Arabia. *Scientific Journal of Research and Business Studies, 38*(1), 503-554. https://doi.org/10.21608/sjrbs.2024.244963.1548

Babi,F., Niazy, R., Talebi, M., & Mohamade, J. (2016). Intellectual Capi,tal Measuring and Reporting. *Bulletin de la Société Royale des Sciences de Liège, 85*, 1063-1069. https://doi.org/10.25518/0037-9565.5859

Bayraktaroglu, A. E., Calisir, F., & Baskak, M. (2019). Intellectual capital and firm performance: An extended VAIC model. *Journal of Intellectual Capital, 20*(3), 406-425. https://doi.org/10.1108/JIC-12-2017-0184

Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management Decision, 36*(2), 63-76. https://doi.org/10.1108/00251749810204142

Buallay, A. M. (2017). The relationship between intellectual capital and firm performance. *Corporate Governance and Organizational Behavior Review, 1*(1), 32-41. https://doi.org/10.22495/cgobr_v1_i1_p4

Canibano,L., Garcia-Ayuso,M., & Sanchez,P. (2000). Accounting for Intangibles: A Literature Review. *Journal of Accounting Literature, 19*, 102-130. Retrieved from https://www.researchgate.net/publication/228291916_Accounting_for_Intangibles_A_Literature_Review

Chang, W. S., & Hsieh, J. J. (2011). Intellectual Capital and Value Creation-Is Innovation Capital a Missing Link? *International Journal of Business and Management, 6*(2). https://doi.org/10.5539/ijbm.v6n2p3

Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital, 6*(2), 159-176. https://doi.org/10.1108/14691930510592771

Chiad, F. (2022). The impact of investment in intellectual capital on the financial performance of Saudi *banks. Algerian Scientific Journal Platform, 21*(1), 240-260. Retrieved from https://www.asjp.cerist.dz/en/article/196214

Dzenopoljac, V., Yaacoub, C., Elkanj, N., & Bontis, N. (2017). Impact of intellectual capital on corporate performance: Evidence from the Arab region. *Journal of Intellectual Capital, 18*(4), 884-903. https://doi.org/10.1108/JIC-01-2017-0014

Ferreira, A. I., & Martinez, L. F. (2011). Intellectual capital: perceptions of productivity a and investment. *Revista De Administração Contemporânea, 15*(2), 249-260. https://doi.org/10.1590/S1415-65552011000200006

Firer, S., & Williams, S. M. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of Intellectual Capital, 4*(3), 348-360. https://doi.org/10.1108/14691930310487806

Hamdan, A. M., Buallay, A. M., & Alareeni, B. A. (2017). The moderating role of corporate governance on the relationship between intellectual capital efficiency and firm's performance: Evidence from Saudi Arabia. *International Journal of Learning and Intellectual Capital, 14*(4), 295. https://doi.org/10.1504/IJLIC.2017.087377

Human Capital Development Program | Saudi Vision 2030. (2016). *Vision 2030*. Retrieved from https://vision2030.gov.sa/en/programs/HCDP.

Hunter, L., Webster, E., & Wyatt, A. (2005). Measuring Intangible Capital: A Review of current practice. *Australian Accounting Review, 15*(36), 4-21. https://doi.org/10.1111/j.1835-2561.2005.tb00288.x

International Accounting Standards Board. (1998). *IAS 38 Intangible Assets*. Retrieved from https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/

Luthy, D. (1998). *Intellectual Capital And Its Measurement*. Retrieved from https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=ab31a561613f45a9c1ee3805a5c9be6ad5d1c031.

Maditinos, D., Chatzoudes, D., Tsairidis, C., & Theriou, G. (2011). The impact of intellectual capital on firms' market value and financial performance. *Journal of Intellectual Capital, 12*(1), 132-151. https://doi.org/10.1108/14691931111097944

Minovski, Z., & Jancevska, I. (2018). The role on intellectual capital and its accounting recognition and measurement. *Journal of Contemporary Economic and Business Issues, 5*(1), 67-76. Retrieved from https://www.econstor.eu/bitstream/10419/193485/1/spisanie-vol-5-br-1-trud-5.pdf

Nadeem, M., Gan, C., & Nguyen, C. (2017). The Importance of intellectual capital for firm performance: Evidence from Australia. *Australian Accounting Review, 28*(3), 334-344. https://doi.org/10.1111/auar.12184

Naushad, M. (2019). Intellectual capital and financial performance of Sharia-compliant banks in Saudi Arabia. *Banks and Bank Systems, 14*(4), 1-9. https://doi.org/10.21511/bbs.14(4).2019.01

Obaid, R. (2020). *An experimental study of the relationship between the disclosure of intellectual capital in financial reports and the improvement of the financial performance of Saudi companies whose shares are traded in the Saudi stock market, a field study*. Retrieved from: https://www.researchgate.net/publication/340438259

Osinski, M., Selig, P. M., Matos, F., & Roman, D. J. (2017). Methods of evaluation of intangible assets and intellectual capital. *Journal of Intellectual Capital, 18*(3), 470-485. https://doi.org/10.1108/JIC-12-2016-0138

Pulic, A. (1998). *Measuring the Performance of Intellectual Potential in Knowledge Economy* (presented in 1998 at the 2nd McMaster World Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential). Retrieved from https://www.scribd.com/document/321143443/pulic-1998-pdf

Pulic, A. (2004). Intellectual capital - does it create or destroy value?. *Measuring Business Excellence, 8*(1), 62-68. https://doi.org/10.1108/13683040410524757

Razak, R. A., Mohammad, J., & Tobiagi, S. M. (2016). Intellectual Capital Disclosures Practices and Intellectual Capital Performance in Saudi Arabia Financial Institution. *Journal of Business Studies Quarterly, 7*(4). Retrieved from https://www.researchgate.net/publication/328215637

Roos, G., Bainbridge, A., & Jacobsen, K. (2001). Intellectual Capital Analysis as a strategic tool. *Strategy & Leadership, 29*(4), 21-26. https://doi.org/10.1108/10878570110400116

Salman, K. (2019, December 21). The real wealth: intellectual capital. *Linkedin.* Retrieved from https://ae.linkedin.com/pulse/%D8%A7%D9%84%D8%AB%D8%B1%D9%88%D8%A9-%D8%A7%D9%84%D8%AD%D9%82%D9%8A%D9%82%D9%8A%D8%A9-%D8%B1%D8%A3%D8%B3-%D8%A7%D9%84%D9%85%D8%A7%D9%84-%D8%A7%D9%84%D9%81%D9%83%D8%B1%D9%8A-khattab-salman

Sayed, O., & Nefzi, A. (2024). The impact of Intellectual Capital on Sustainable Performance: Banking Sector in Saudi Arabia. *Sustainability, 16*(11), 4528. https://doi.org/10.3390/su16114528

Si, X. (2019). Literature review on the relationship between Intellectual Capital and Enterprise Performance. *Modern Economy, 10*(02), 386-398. https://doi.org/10.4236/me.2019.102026

Smriti, N., & Das, N. (2018). The impact of intellectual capital on firm performance: a study of Indian firms listed in COSPI. *Journal of Intellectual Capital, 19*(5), 935-964. https://doi.org/10.1108/JIC-11-2017-0156

Sulphey, M. M., & Naushad, M. (2019). The position of intellectual capital among Saudi banks. *Marketing and Management of Innovations,* (4), 11-21. https://doi.org/10.21272/mmi.2019.4-01

Vision 2030. (2016). *Vision 2030*. Retrieved from https://vision2030. gov.sa/sites/ default /files/report/Saudi_Vision2030_EN_2017.pdf

Zéghal, D., & Maaloul, A. (2010). Analyzing value added as an indicator of intellectual capital and its consequences on company performance. *Journal of Intellectual Capital, 11*(1), 39-60. https://doi.org/10.1108/14691931011013325