Enrichment: Journal of Management, 13 (3) (2023)

Published by: Instiute of Computer Science (IOCS)

Enrichment: Journal of Management

Journal homepage: www.enrichment.iocspublisher.org

Intellectual capital's role in shaping corporate financial performance from a knowledge-based theory perspective

Tasrim[1], Ansri Jayanti[2], Estiani[3], Tyagita Dianingtyas Sudibyo[4]

[1,4]Management, Universitas PGRI Yogyakarta, Bantul, Indonesia

[2]Management, Economics School of Makassar Maju, Makassar, Indonesia

[3]Management, Universitas Dayanu Ikhsanuddin, Baubau, Indonesia

ARTICLE INFO

Article history:

Received July 29, 2023
Revised August 02, 2023
Accepted August 12,2023

Keywords:

Employees;
Intellectual capital;
Knowledge-based;
Performance;
Relational;
Structure.

ABSTRACT

Performance is a condition that is always a concern for managers. Conditions that are easy to "pronounce" but "difficult" to realize. This requires knowledge that exists in all components of the company. This study investigates the connection between IC and the organization's financial success. Companies in the energy categories (Oil, Gas, and Coal) listed on the Indonesia Stock Exchange make up the sample for this study (IDX). The companies selected to be sampled routinely report their financial statements from 2010-2022. In addition, the company did not suffer losses in the study period. Data is a financial statement that is then analyzed by regression analysis. The results showed that all IC items (public model) affect financial performance. However, SCE has a negative influence. This shows that the structure that the company is building allows for changes. This is because SCE is the primary support of HCE in operations.

Corresponding Author:

Tasrim
Manajemen,
Universitas PGRI Yogyakarta,
Jl. PGRI I No. 117 Sonosewu, Yogyakarta, Bantul, 55182, Indonesia.
Email: tasrim@upy.ac.id/asrilpalopo@gmail.com

INTRODUCTION

Company performance as a form of company existence. The company's global environmental conditions are very competitive. As evidenced by the advancement of information technology, communication methods, and science, business is overgrowing (Soewarno & Tjahjadi, 2020). The capability to understand and apply is necessary for a business to succeed (Pulic, 2004). Knowledge as an intangible asset emerges as a fresh catalyst for financial success and gaining a competitive edge (Soewarno & Tjahjadi, 2020). The growing demands of the global industry encourage research in looking at intangible assets to create competitiveness, such as intellectual capital (IC). In addition to being an influential force and resource for value creation and sustainable business growth, A significant source of innovation is IC (Chowdhury et al., 2019; Soewarno & Tjahjadi, 2020). The absorption of knowledge related to stakeholders and the ability to apply it to employees positively affects business performance (Ahmed & Guozhu, 2020).

IC represents a non-financial and tangible resource stemming from an organization's expertise, experience, and know-how, which fosters a competitive advantage and enhances overall

performance (Allameh, 2018). Most concur that IC is essential to the knowledge-based economy (Alrowwad et al., 2020). Alrowwad et al. (2020) IC is recognized as a critic-critical-tical in a business's financial performance. A helpful asset inside a business, IC can be improved through skill and understanding through good HRM practices (Kianto et al., 2017). The published research from the intellectual capital journal is renowned for advancing four important research streams, including knowledge management, the relationship between intellectual capital, financial performance, and market value, as well as intellectual capital research in universities, education, and the public sector (Bellucci et al., 2020).

Managers should concentrate on cultivating sustainable practices aimed at developing IC, encompassing skills that competitors find challenging to imitate, thereby enabling the long-lasting establishment of an advantage over competitors (Nirino et al., 2020). The intellectual capital journal is renowned for advancing four important research streams, including knowledge management, reporting and disclosure of intellectual capital, intellectual capital research in universities, education, and the public sector, and the connection between intellectual capital, financial performance, and market value (Bayraktaroglu, 2019).

Suppose a company prioritizes the significance of structural capital (SC) during the formulation and execution of its business strategy. In that case, it will gain advantages by reinforcing its infrastructure for collecting, storing, sharing, and applying knowledge (Z. Wang et al., 2018). RCE is characterized by its ability to meet customer needs through economically efficient products, prioritizing growth and ROA over productivity and innovation. On the other hand, RC involves the creation of groundbreaking products or their components within prospector firms to attain a more formidable technological position (Demartini & Beretta, 2019; St-Pierre & Audet, 2011). The intellectual capital journal is renowned for advancing four important research streams, including knowledge management, reporting and disclosure of intellectual capital, intellectual capital research in universities, education, and the public sector, and the connection between intellectual capital, financial performance, and market valueAdditionallvalue additionally social capital are associated with poor corporate performance. In contrast, high levels of organizational and human capital have a significant positive impact (Ahmed & Guozhu, 2020).

Enhanced IC is linked to better financial performance (Vazquez- Avila et al., 2012; W. K. Wang et al., 2013). In Portuguese high-tech SMEs, IC also acts as a mediator between strategic relationships and organizational performance (Ferreira & Franco, 2017). Although a statistically significant positive correlation has been observed between the Internal IC and ROA of a corporation, external IC does not play a role in this relationship (Mubaraq & Ahmed Haji, 2014). IC is related to Long-term value (Alvino et al., 2021). IC as an intermediate for performance is carried out by (Beretta et al., 2019). IC indirectly affects performance (Kengatharan, 2019); Additionally, it is established that some IC variables and company performance through productivity have a mediated relationship. Component ICs can even indirectly affect performance (Beretta et al., 2019). According to studies, the association between knowledge-based HRM practices and innovation performance is positively moderated by IC (Kianto et al., 2017). IC moderates the effect of working capital on a company's performance (Bayraktaroglu, 2019). Human capital, structural capital, and relational capital—the components of IC—show a positive link with the rate and quality of innovation, enhancing a company's operational and financial performance. HC is viewed as the primary driver of IC due to its beneficial effects on corporate success (Chowdhury et al., 2019; Jardon & Martos, 2012). The earnings of a corporation are influenced by physical capital, human capital, and social capital. Physical capital, human capital, structural capital, and relational capital impact profitability and productivity (Xu & Li, 2019). Capital Employed Efficiency (CEE) has a dampening impact that can be applied to financial employment when compared to Human Capital Efficiency (HCE) and Capital Employed Efficiency (CEE) (Ousama, 2020). The findings of multiple studies on IC components show no significant relationship between HC and other financial, market-based, and nonfinancial performance criteria (F-Jardón & Martos, 2009; Khalique et al., 2015). Khalique et al. (2015) HCE

exhibits negative marked coefficients and does not impact ROA and ROE (Soewarno & Tjahjadi, 2020). HCE does not affect ROE (Chowdhury et al., 2019). Then it was suggested to affirm the relationship between ICs and performance (Demartini & Beretta, 2019) that it is necessary to see the connection between various IC components improving (inhibiting) performance. Furthermore (Demartini & Beretta, 2019) mentioned that IC affects various financial performance metrics, but results are sometimes unexpected and mixed. In addition, ICs have difficulty being attractive but very difficult to operationalize (Z. Wang et al., 2018)

The analysis mentioned above shows that there are still gaps in the knowledge of the relationship between IC and financial performance. The description shows some of the gaps in IC research, including concerning each component. First, IC has shown an influence on performance, both directly and indirectly. However, the results of these studies are still unable to predict the results. Second, there is an inconsistent relationship between IC and financial performance, such as having an effect and not having an effect. Third, as seen from each IC component, IC components have diverse influences. Starting from having an effect, it has no effect, even on positive and negative relationships. This indicates that further research is needed on the relationship between IC and financial performance by looking at the effect of each IC component. Thus, the policies carried out by managers are more directed by looking at the relationship of each IC component. Based on this, this study aims to explore the relationship of each IC component (HCE, SCE, and CEE) with the company's financial performance, focusing on manufacturing (energy) in Indonesia.

RESEARCH METHOD

The study targeted the oil, gas, and coal industries in Indonesian mining firms. Seventy-two of the research's subject firms will be listed on the Indonesia Stock Exchange (IDX) in 2022. A purposive sampling technique was used for the sampling, with the following two criteria: 1) the company must be registered and consistently report its financial statements on the IDX website during the research period from 2010 to 2022, and 2) the company must experience profits (positive pretax profit). As a result of the sampling process, four companies were selected as research samples.
The secondary data used in this study was taken from the company's financial statements from 2010 through 2022.

Multiple regression analysis with SPSS software support is the analysis technique used. The presence of multicollinearity has been verified using traditional assumption tests before regression analysis. Regression models examine the connection between intellectual capital and corporate performance.

$$\text{Performance (ROA)} = \beta 0 + \beta 1\text{HCE} + \beta 2\text{SCE} + \beta 3\text{CeE} + e \quad \text{model (1)}$$
$$\text{Performance (ROE)} = \beta 0 + \beta 1\text{HCE} + \beta 2\text{SCE} + \beta 3\text{CeE} + e \quad \text{model (2)}$$

A relationship is deemed significant if the significance value (sig) is less than 0.05 and the data confidence level is 95 percent. Return on equity and return on assets were the performance indicators considered in this study. The intellectual capital variable is measured using the HCE (human capital efficiency), SCE (structural capital efficiency), and CEE indicators (capital employed efficiency). Measurements are given for each research variable in the following table.

Table 1. Definition of research variables

Variable	Indicator	Description	Information
Intellectual capital	Value added (VA)	VA = OUT–IN Operating earnings before interest and taxes (EBIT) with non-cash elements like depreciation and amortization added back are what is referred to as VA, and it	(Bayraktaroglu, 2019; Kesse & Pattanayak, 2019; Mahmood & Shujaat, 2020; Nirino et al., 2020; Rehman et al.,

		displays the value the company has generated. Output = is the business's annual operating profit Input = "Refers to the firm's operating expenses" pertains to the operational costs incurred by the company (Ousama, 2020; Soewarno & Tjahjadi, 2020)	2022; Soetanto & Liem, 2018; Z. Wang et al., 2018; Xu & Li, 2019)
	HCE = The value contributed to the VA by each dollar spent on human capital (HC)	HCE = VA/HC VA = value added HC = human capital (Ousama, 2020; Soewarno & Tjahjadi, 2020)	
	The value that each dollar spent in structural capital (SC) adds to the VA is known as structural capital efficiency (SCE)	SC = VA–HC VA = value added SCE = SC/VA SC = structural capital HC = human capital (Chowdhury et al., 2019) (Soewarno & Tjahjadi, 2020)	
	Capital employed efficiency (CEE) = The contribution made by every unit of physical capital to the VA	VA = value added EEC = VA/EC CE = capital employed (Ousama, 2020; Soewarno & Tjahjadi, 2020)	
Financial Performance	ROA	EBIT/total assets EAT/ total equity	(Bayraktaroglu, 2019; Chowdhury et al., 2019; Rehman et al., 2022; Soetanto & Liem, 2018; Soewarno & Tjahjadi, 2020; Z. Wang et al., 2018; Xu & Li, 2019)
	ROE		

This study's independent variable is intellectual capital, which is quantified using HCE, SCE, and CEE indicators. HCE stands for human capital efficiency, while SCE and CEE indicators reflect structural and structural capital efficiency, respectively (capital employed efficiency). While the performance of the company's finances, as evaluated by two different financial ratios, is the dependent variable. Return on assets (ROA) and return on equity are two financial ratios measuring different aspects of financial performance (ROE).

RESULTS AND DISCUSSIONS

The degree of multicollinearity between the independent and dependent variables is measured by the variance inflation factor (VIF) value and the tolerance value. It is required that the VIF value be lower than 10, and the tolerance value be higher than 0.1.

Table 2. Multicolleniricity test results

Model		Collinearity Statistics	
		Tolerance	VIF
1	HCE	.391	2.555
	SCE	.432	2.315
	C E E	.860	1.163

Source: Research data (processed), 2023
Note: Returns on Assets (ROA) and Returns on Equity (ROE) are the same. HCE, SCE, or CEE, or capital employed efficiency, is the efficiency of human capital

The results of the multicollinearity test, as shown in Table 2 above, show that the tolerance value is greater than 0.1, and the VIF value is less than 10. This result implies that the independent variables are not significantly collinear

Table 3. Variable description

Year	Ratio				
	ROA	ROE	HCE	SCE	RCE
2010	0,168	0,238	75,563	0,986	0,774
2011	0,223	0,315	94,506	0,980	0,929
2012	0,201	0,288	74,124	0,962	0,819
2013	0,130	0,185	68,334	0,972	0,753
2014	0,180	0,257	78,132	0,975	0,819
2015	0,064	0,104	59,172	0,976	0,565
2016	0,091	0,134	54,153	0,975	0,497
2017	0,150	0,217	51,529	0,971	0,523
2018	0,116	0,165	48,533	0,963	0,441
2019	0,091	0,129	50,627	0,972	0,528
2020	0,019	0,036	40,368	0,969	0,656
2021	0,204	0,278	56,199	0,973	0,844
2022	0,307	0,425	87,317	0,983	1,125
Mak	0,307	0,425	94,506	0,986	1,125
Min	0,019	0,036	40,368	0,962	0,441
Average	0,150	0,213	64,504	0,974	0,713

Source: Research data (processed), 2023
Note: Returns on Assets (ROA) and Returns on Equity (ROE) are the same. HCE, SCE, or CEE, or capital employed efficiency, is the efficiency of human capital.

Table 3. shows that the highest ROA was 0.307, and the lowest ROA was 0.019, with an average value of 0.150. The highest ROE was 0.425, and the lowest was 0.036, with an average value of 0.213. This shows how the business's financial performance improved over the transitional period following the outbreak in Indonesia. Where better financial performance occurs in 2022. Intellectual capital measured by three HCE, SCE, and CEE indicators had the highest value of 94,506 each, 0.986, and 1,125. The lowest value was 40,368, 0.962, and 0.441. The IC average worth indicator is 64,504, 0.974, and 0.713. This gives an idea of the quality of the company's IC

Table 4. Regression results

Variable	Financial Performance (ROA)	Financial Performance (ROE)
(Constant)	2,364	2,728
HCE	0,002***	0,003***
SCE	-2,531***	-2,928***
C E E	0,158***	0,220***
R2	0,527	0,556

Source: Research data (processed), 2023
Note: *** nilai sig < 0,05; Note: Returns on Assets (ROA) and Returns on Equity (ROE) are the same thing. HCE, SCE, or CEE, or capital employed efficiency, is the efficiency of human capital

The results of the hypothesis test show that HCE and CEE positively affect the company's financial performance (Table 4) (ROA and ROE) with coefficients of influence of 0.002 and 0.003, respectively, 0.158 and 0.220. SCE, however, has a detrimental impact on the business's financial success (ROA and ROE), with coefficient values of -2.531 and -2.928. This suggests that the research

hypothesis is accepted. The R-value for the relationship between intellectual capacity and financial performance is 0.527 for ROA and 0.556 for ROE, respectively.

IC, short for "IC," encompasses all knowledge-related assets within a company that can create added value (Asiaei et al., 2020). Additionally, intellectual capital (IC) can be understood as the whole amount of information, in all of its manifestations, that a corporation possesses and has the potential to employ in order to sustainably acquire a competitive advantage (Z. Wang et al., 2018). Today, in the knowledge-based economy, creating value mainly relies on efficiently using intangible assets (Chowdhury et al., 2019). A competent workforce, effective organizational structure, and positive relationships with stakeholders make acquiring, integrating, transforming, and utilizing knowledge easier (Ahmed & Guozhu, 2020). So knowledge-based views such as IC have an excellent effect on the company's sustainability.

The outcomes demonstrated that HCE positively impacted the business's financial performance. This clearly shows the crucial role that people—specifically competent employees—play in fostering performance. This discovery is consistent with earlier investigations such as (Ahmed & Guozhu, 2020; Nadeem & Massaro, 2018; Ousama, 2020). Indirectly, the level of innovation enabled by intellectual capital has a positive effect on the organization's operational and financial success, in conjunction with indicators of human, structural, and relational capital. This effect is compounded when human capital is taken into account (Z. Wang et al., 2018). The performance of companies and IC, including its elements (human, innovative, and physical capital), are significantly positively correlated (Nadeem & Massaro, 2018). Research (Chowdhury et al., 2019) found that HCE affects ROA but does not affect ROE. Human Capital (HC) consists of knowledge employees take home after completing their work shifts (Alrowwad et al., 2020). Human capital (HC) comprises various components, such as experience, innovation skills, teamwork, and tolerance. Other components considered are employee adaptability, motivation, learning potential, educational attainment, and conventional education (Obeidat et al., 2018; Zawaideh et al., 2018). Organizational capital, which may include aspects such as organizational culture, technical processes, and formal structures that promote the assimilation and refinement of knowledge within the business, is owned by and managed by the organization. Employees possess human capital (HC), whereas the organization owns and manages organizational capital (Ahmed & Guozhu, 2020). Proficient employees in organizational systems, enhanced by efficient processes, can effectively apply new knowledge, resulting in improved business performance (Ahmed & Guozhu, 2020). This condition provides a "must" for company managers to pay special attention to human capital. Extensive attention is undoubtedly on the knowledge aspect of employees so that the company's operations are maximized.

The second IC component has an adverse effect on the SCE's contribution to the company's financial performance (ROA and ROE). The position of various intangible assets, including databases, software, organizational culture, patents, and technology, is disclosed (Jardon & Martos, 2012; Nirino et al., 2020) inversely proportional to financial performance. As a supporter of employee work, this component must be "wary of" because this item is essential for the "acceleration" of employee performance. This negative relationship became an "anomaly" from previous studies (Ahmed & Guozhu, 2020). The level of organizational capital has a significant and beneficial impact on the success of a company. The intellectual component, which includes HC and SC, has been shown to have a considerable impact on ROA, but it does not have the same effect on ROE (Chowdhury et al., 2019). SC is not significant to financial performance (Ousama, 2020). It is possible that the strained relationship between SCE and its stakeholders is because there is not enough communication between them and the requirements of the workers at the company. Employees are supported in attaining company goals by organizational structure, procedures, strategies, systems, hardware, databases, and organizational culture (Soetanto & Liem, 2018). The knowledge that stays with the business after people leave makes up structural capital (SC). It often covers all corporate knowledge employees do not retain upon leaving the company (Alrowwad et al., 2020). This

suggests that at the core of this capital is the "connectivity" of each stakeholder with employees. So, this capital has a negative impact due to connectivity that does not run perfectly. SC constructs the infrastructure required by human resources (Bayraktaroglu, 2019). Organizational capital plays a vital role when individuals with diverse backgrounds join an organization, as it provides a cooperative framework. It establishes a shared reference point through processes and procedures, fostering cohesion among the members (Brusoni et al., 2001).

The financial performance benefits from CEE. This is a way of affirming that a performance's connection to outside sources becomes an integral element. The interactions between a business and its external stakeholders, such as partners, customers, and suppliers, are considered to be a part of CEE, also known as relational capital rather commonly (Han & Li, 2015). Han & Li (2015) Indeed, it is created by forming, fostering, and developing enduring connections with any institution, person, or group that is thought to impact the organization's operations. The findings of this study are in line with those obtained from previous research and are comparable to the results obtained from previous investigations (Ousama, 2020). This study also demonstrates that CEE significantly affects financial performance (Nadeem & Massaro, 2018). The study looks at how relationship capital affects value and how intellectual capital (IC) and its components affect business success (Salvi et al., 2020), relationship capital affects value (Ahmed & Guozhu, 2020) relationship capital as a predictor of weak business performance. SEE has a large and positive association with ROA, but a big and negative link with ROE (Rehman et al., 2022).

CONCLUSION

IC refers to a body of knowledge that each individual employee of the company holds. Knowledge like this has a good impact on competitiveness, as can be seen by its manifestation in positive performance. The findings of the study indicate that internal communication within the organization does have an effect on the successful operation of the business. The SCE component, on the other hand, demonstrates the opposite direction. This negative SCE is made possible by the relevance of all existing interests to employees that is "undelivered," but nonetheless still exists. They are of the opinion that the utilization of structured capital contributes significantly to the improvement of both the company's financial and operational performance. The negative consequences of CEE's emphasis on relational interactions can be mitigated by employing knowledge-based theory to explain the connection between IC and financial success. This will allow for the reduction of the negative effects. The research results provide full support for knowledge-based theory in explaining the relationship between IC and financial performance. However, the SCE section shows a negative direction. This shows that knowledge plays an important role in company acceleration. In addition, for companies, managers can take appropriate policies in developing corporate knowledge. Thus, this research contributes, firstly, to the development of knowledge-based theory in the relationship between IC and financial managers. Second, company managers know clearly the importance of the position of each IC component. Third, SCE can put pressure on HCE. The limitations of this research are first, the research does not conduct interviews. This study relied on previously collected secondary data. Only data from financial statements are used in the research; no other methods, such as interviews, are employed to acquire information. Second, the variables included in the model are limited to IC components. The sample consists solely of an energy corporation, other than this fact. After that, researchers can undertake comparable research by addressing the constraints of this study, which may include employing a variety of research approaches. Such as conducting interviews, adding IC components in addition to public models and combining several theories such as agency theory.

References

Ahmed, S. S., & Guozhu, J. (2020). Intellectual capital and business performance : the role of dimensions of absorptive capacity. *Journal of Intellectual Capital*, *21*(1), 23–39. https://doi.org/10.1108/JIC-11-2018-0199

Allameh, S. M. (2018). Antecedents and consequences of intellectual capital: The role of social capital, knowledge sharing and innovation. *Journal of Intellectual Capital*, *19*(5), 858–874. https://doi.org/10.1108/JIC-05-2017-0068

Alrowwad, A., Abualoush, S. H., & Masa'deh, R. (2020). Innovation and intellectual capital as intermediary variables among transformational leadership , transactional leadership , and organizational performance. *Journal of Management Developmen*, *39*(2), 196–222. https://doi.org/10.1108/JMD-02-2019-0062

Alvino, F., Vaio, A. Di, Hassan, R., & Palladino, R. (2021). Intellectual capital and sustainable development : a systematic literature review. *Journal of Intellectual Capital*, *22*(1), 76–94. https://doi.org/10.1108/JIC-11-2019-0259

Asiaei, K., Barani, O., Bontis, N., & Arabahmadi, M. (2020). Unpacking the black box How intrapreneurship intervenes in the. *Journal of Intellectual Capital*, 1469–1930. https://doi.org/10.1108/JIC-06-2019-0147

Bayraktaroglu, A. E. (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

Bellucci, M., Marzi, G., & Ciampi, F. (2020). Journal of Intellectual Capital : a review of emerging themes and future trends trends. *Journal of Intellectual Capital*. https://doi.org/10.1108/JIC-10-2019-0239

Beretta, V., Demartini, C., Trucco, S., & Internazionali, S. (2019). Does environmental , social and governance performance influence intellectual capital disclosure tone in integrated reporting ? *Journal of Intellectual Capital*, *20*(1), 100–124. https://doi.org/10.1108/JIC-02-2018-0049

Brusoni, S., Prencipe, A., & Pavitt, K. (2001). Knowledge specialization, organizational coupling, and the boundaries of the firm: Why do firms know more than they make? *Administrative Science Quarterly*, *46*(4), 597–621. https://doi.org/10.2307/3094825

Chowdhury, L. A. M., Rana, T., & Azim, M. I. (2019). Intellectual capital efficiency and organisational performance In the context of the pharmaceutical industry in Bangladesh. *Journal of Intellectual Capital*, *20*(6), 748–1930. https://doi.org/10.1108/JIC-10-2018-0171

Demartini, M. C., & Beretta, V. (2019). Intellectual capital and SMEs ' performance : A structured literature review. *Journal of Small Business Management*, *00*(00), 1–45. https://doi.org/10.1080/00472778.2019.1659680

F-Jardón, C. M., & Martos, M. S. (2009). Intellectual capital and performance in wood industries of Argentina. *Journal of Intellectual Capital*, *10*(4), 600–616. https://doi.org/10.1108/14691930910996670

Ferreira, A., & Franco, M. (2017). The Mediating Effect of Intellectual Capital in The Relationship Between Strategic Alliances and Organizational Performance in Portuguese Technology-Based SMEs. *European Management Review*, *14*(3), 303–318. https://doi.org/10.1111/emre.12107

Han, Y., & Li, D. (2015). Effects of intellectual capital on innovative performance: The role of knowledge-based dynamic capability. *Management Decision*, *53*(1), 40–56.

Jardon, C. M., & Martos, M. S. (2012). Intellectual capital as competitive advantage in emerging clusters in Latin America. *Journal of Intellectual Capital*, *13*(4), 462–481. https://doi.org/10.1108/14691931211276098

Kengatharan, N. (2019). A knowledge-based theory of the firm Nexus of intellectual capital , productivity. *International Journal of Manpower*. https://doi.org/10.1108/IJM-03-2018-0096

Kesse, G., & Pattanayak, J. K. (2019). Borsa _ Istanbul Review Does investing in intellectual capital improve productivity ? Panel evidence from commercial banks in India. *Borsa Istanbul Review*, *19*(3), 219–227. https://doi.org/10.1016/j.bir.2019.03.001

Khalique, M., Bontis, N., Abdul Nassir bin Shaari, J., & Hassan Md. Isa, A. (2015). Intellectual Capital in Pakistani Small Medium Enterprises. *Journal of Intellectual Capital*, *16*(1), 224–238.

Kianto, A., Sáenz, J., & Aramburu, N. (2017). Knowledge-based human resource management practices, intellectual capital and innovation. *Journal of Business Research*, *81*(December 2016), 11–20. https://doi.org/10.1016/j.jbusres.2017.07.018

Mahmood, T., & Shujaat, M. (2020). Technological Forecasting & Social Change Balancing innovation and exploitation in the fourth industrial revolution : Role of intellectual capital and technology absorptive capacity. *Technological Forecasting & Social Change*, *160*(August), 120248. https://doi.org/10.1016/j.techfore.2020.120248

Mubaraq, S., & Ahmed Haji, A. (2014). The impact of corporate governance attributes on intellectual capital

disclosure: A longitudinal investigation of Nigerian banking sector. *Journal of Banking Regulation*, *15*(2), 144–163. https://doi.org/10.1057/jbr.2013.15

Nadeem, M., & Massaro, M. (2018). If You Can Measure It , You Can Manage It : A Case of Intellectual Capital. *Australian Accounting Review*, *00*(December), 1–13. https://doi.org/10.1111/auar.12227

Nirino, N., Ferraris, A., Miglietta, N., & Invernizzi, A. C. (2020). Intellectual capital : the missing link in the corporate social responsibility – financial performance relationship capital. *Journal of Intellectual Capital*, 1469–1930. https://doi.org/10.1108/JIC-02-2020-0038

Obeidat, A. M., Abualoush, S. H., Irtaimeh, H. J., Khaddam, A. A., & Bataineh, K. A. (2018). The role of organisational culture in enhancing the human capital applied study on the social security corporation. *International Journal of Learning and Intellectual Capital*, *15*(3), 258–276. https://doi.org/10.1504/IJLIC.2018.094722

Ousama, A. A. (2020). The association between intellectual capital and fi nancial performance in the Islamic banking industry An analysis of the GCC banks. *International Journal of Islamic and Middle Eastern Finance and Management*, *13*(1), 75–93. https://doi.org/10.1108/IMEFM-05-2016-0073

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

Rehman, A. U., Aslam, E., & Iqbal, A. (2022). Borsa _ Istanbul Review Intellectual capital efficiency and bank performance : Evidence from islamic banks. *Borsa Istanbul Review*, *22*(1), 113–121. https://doi.org/10.1016/j.bir.2021.02.004

Salvi, A., Vitolla, F., Giakoumelou, A., Raimo, N., & Rubino, M. (2020). Technological Forecasting & Social Change Intellectual capital disclosure in integrated reports : The e ff ect on fi rm value. *Technological Forecasting & Social Change*, *160*(July). https://doi.org/10.1016/j.techfore.2020.120228

Soetanto, T., & Liem, P. F. (2018). INTELLECTUAL CAPITAL IN INDONESIA : DYNAMIC PANEL. *Journal of Asia Business Studies*.

Soewarno, N., & Tjahjadi, B. (2020). Measures that matter : an empirical investigation of intellectual capital and financial performance of banking firms in Indonesia. *Journal of Intellectual Capital*, *2014*. https://doi.org/10.1108/JIC-09-2019-0225

St-Pierre, J., & Audet, J. (2011). Intangible assets and performance: Analysis on manufacturing SMEs. *Journal of Intellectual Capital*, *12*(2), 202–223. https://doi.org/10.1108/14691931111123395

Vazquez- Avila, G., Sanchez-Gutierrez, J., & Rodriguez-Camacho, R. (2012). Impact of Knowledge Management and Intellectual Capital on Competitiveness of SMEs Manufacturing in the Western Region of Mexico. *Journal Knowledge and Economy*, *10*(1), 7.

Wang, W. K., Lu, W. M., & Wang, Y. H. (2013). The relationship between bank performance and intellectual capital in East Asia. *Quality and Quantity*, *47*(2), 1041–1062. https://doi.org/10.1007/s11135-011-9582-2

Wang, Z., Cai, S., Liang, H., Wang, N., & Xiang, E. (2018). Intellectual capital and firm performance : the mediating role of innovation speed and quality. *The International Journal of Human Resource Management*, *0*(0), 1–29. https://doi.org/10.1080/09585192.2018.1511611

Xu, J., & Li, J. (2019). The interrelationship between intellectual capital and firm performance: evidence from China's manufacturing sector. *Journal of Intellectual Capital*. https://doi.org/10.1108/JIC-08-2019-0189

Zawaideh, F. H. S., Al-Zoubi, M. I., Abualoush, S. H., Kanaan, R. K., & Masa'deh, R. (2018). The Impact of Knowledge Documentation Process as an Intermediary Variable among Knowledge Acquisition Process, Organizational Culture and Human Capital. *Modern Applied Science*, *12*(11), 151. https://doi.org/10.5539/mas.v12n11p151