

AN EXAMINATION OF MEDIATING MECHANISMS IN THE RELATIONSHIP BETWEEN INTELLECTUAL CAPITAL, GOOD CORPORATE GOVERNANCE, AND FIRM PERFORMANCE

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Abstract. Increased competition in the industry is a result of globalization, which brings both challenges and opportunities for all parties involved. The expansion of the business sector and ease of market entry have made competition even fiercer, leading to more competitive prices. Companies are working hard to maintain their operations in the face of this competitive pressure. This study to examine the role of the value chain on intellectual capital (IC) and good corporate governance (GCG). Previous research has shown inconsistencies whereby companies with well-managed resources have not demonstrated improved performance. This study aims to address this issue in order to improve corporate performance and provide a new perspective on the role of intermediaries in the value chain. This quantitative research using the explanatory method. data collection techniques using purposive sampling method from manufacturing companies located in Indonesia. The collected data were analyzed with Partial Least Squares (PLS) to conduct multiple regression tests. The results of hypothesis testing show that IC has a positive impact on the company's performance through the value chain. GCG has been shown to have no positive impact on the company's performance, except through the value chain. The implications of the research results for manufacturing companies include improving IC quality by continuing training for human resource skills, improving resource development facilities, strengthening cooperation with suppliers for smooth production, and improving relationships with consumers so that products are more accepted. The principles of Good Corporate Governance (GCG) form the foundation for establishing systems, structures and a corporate culture that can adapt to business changes and support internal control and risk management. For GCG to be implemented in accordance with best practice, a strong commitment is required at all levels of the organisation, from the lowest to the highest levels of management. This study aims to provide a new perspective on the intermediate position in the value chain by expanding the Resource Base View (RBV) theory through data on the influence of IC and strong corporate governance on company success.

Keywords: intellectual capital, good corporate governance, value chain, firm performance.

JEL Classification: G34, O34, L14, L25.

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1. Introduction

Intensified competition in the industrial environment is a consequence of the globalization process, leading to challenges and opportunities for all stakeholders (Shahzad et al., 2022). Competition in the current market increases as the business sector expands and it is easier to enter the market (Zhang, 2020). As more businesses develop in the same industry, the price of goods in the market becomes competitive (Shapiro, 2019). Companies will strive to defend running business from the onslaught of increasingly fierce competition. In the manufacturing industry, intensifying global competition presents a dilemma between the demands for short-term cost efficiency and the need to ensure sustainability through the creation of added value.

Excessive efficiency risks undermining quality and innovation capacity, which are, in fact, crucial for long-term competitiveness. Based on Michael Porter's value chain concept, competitive advantage is determined by the ability to manage all activities to create value.

Two different viewpoints are evident in the discussion of how globalization affects economic transformation. On the one hand, businesses are prioritizing intangible assets like intellectual capital as a result of globalization, which is propelling the transition from a traditional production-based economy to a knowledge-based one (Alvino et al., 2021). This viewpoint's proponents contend that intangible assets can produce significant value addition, are hard to duplicate, and offer a long-term competitive edge (Cheng et al., 2018). On the other side, there is a perspective that

highlights the continued importance of tangible assets and operational effectiveness. Businesses cannot provide high quality outputs optimal costs without the effective management of inputs including labour, raw materials, and equipment. Consequently, some argue that an excessive focus on intangible assets risks overlooking the importance of operational processes. This debate ultimately demonstrates that a company's success is determined not only by the dominance of intangible assets, but also by its ability to maintain a balance between knowledge-based innovation and operational efficiency.

As a component of intangible assets, the impact of intellectual capital (IC) on corporate performance remains a subject of debate. On the one hand, IC is regarded as a vital component capable of enhancing a company's operational efficiency and competitiveness (Xu & Liu, 2020), particularly through the innovation and creativity it generates, which has a positive impact on commercial performance (Oppong & Pattanayak, 2019). Conversely, the role of IC is viewed as insignificant in relation to corporate performance, leading some to question its relevance. This argument is based on findings that IC cannot predict changes in market value versus book value, nor financial decisions (Chowdhury et al., 2019). Consequently, investors tend not to consider it a primary factor when making investment decisions. These differing views highlight uncertainty regarding the extent to which IC actually enhances a company's performance and value.

Corporate governance is one of the key aspects that has sparked debate regarding the assessment of a company's performance. On the one hand, the implementation of good corporate governance (GCG) is regarded as a cornerstone of sustainable performance, as it reflects transparency, accountability and professional management. With effective governance, companies are believed to be able to boost investor confidence and achieve more stable financial performance. However, some argue that good corporate governance does not automatically guarantee improved performance (Ma et al., 2024). A company can still perform poorly if it is not supported by superior products, innovation or the right business strategy. There are companies that implement GCG effectively but have not yet achieved the expected results, which suggests that governance is not the sole determining factor. Consequently, this debate underscores that business performance success does not depend solely on good governance; companies must also know how to integrate governance with other strategic elements.

In studies examining the influence of intellectual capital (IC) and good corporate governance (GCG) on corporate performance, the existing literature generally treats these two variables as direct determinants of performance without exploring the underlying mechanisms in depth. A number of studies do indeed show that IC contributes to improved performance through knowledge management and innovation, whilst GCG plays a role in enhancing organizational transparency and efficiency. However,

the majority of studies remain partial and have not yet integrated the perspective of internal company processes, particularly through the value chain framework.

A research gap has emerged due to the limited number of studies examining the value chain as a mediating variable that explains how IC and GCG are operationally translated into improved performance. Furthermore, previous research has also tended to produce inconsistent findings regarding the strength of the influence of IC and GCG on performance, suggesting the presence of intervening variables that have not yet been accounted for. On the other hand, empirical studies testing the integration of these three variables within a comprehensive model, particularly within the context of the manufacturing industry in developing countries, remain relatively limited. Therefore, this study aims to address this gap by testing the mediating role of the value chain in the relationship between IC, GCG, and firm performance, in order to provide a more holistic understanding of the mechanisms of value creation and competitive advantage. Therefore, this study aims to bridge this gap by offering a new perspective, particularly regarding the intermediary position within the value chain. By integrating the influence of IC and the implementation of strong corporate governance, this study also seeks to expand the theoretical debate within the Resource Based View (RBV) framework regarding how resources actually contribute to corporate success.

2. Literature review

2.1. Intellectual capital and firm performance

In the era of the knowledge-based economy, a company's ability to manage intellectual capital which comprises intangible assets consisting of human capital, structural capital and organisational capital is crucial to creating corporate value. Studies show that intellectual capital enhances business performance, particularly financial performance such as profitability. Knowledge, skills and sound organisational systems can boost productivity and operational efficiency. Human capital, which encompasses employees' knowledge, skills, experience and creativity, contributes to improved company performance. Innovative and talented employees can accelerate strategic decision-making and enhance productivity and the quality of products or services (Tidd & Bessant, 2018). Structural capital, which encompasses systems, processes, organisational culture, information technology and knowledge documentation, supports employee effectiveness and reduces reliance on specific individuals. Efficient management systems, standardised processes and appropriate technology enable companies to improve operational efficiency, product quality and sustainable innovation (Chowdhury et al., 2019). Capital relationships which encompass a company's relationships with customers, suppliers, business partners and the community provide greater access to information, resources and opportunities for collaboration. Good relationships with customers and suppliers can enhance loyalty, reduce

transaction costs and speed up the supply chain (Chopra & Meindl, 2016). Overall, if a company manages these three types of intellectual capital human capital, structural capital, and relational capital effectively, the results will be better in terms of financial performance, operational efficiency, and competitiveness (Porter, 1985; Tidd & Bessant, 2018; Chopra & Meindl, 2016).

2.2. Good corporate governance and firm performance

To ensure that a business is run in a transparent, accountable and responsible manner towards its stakeholders, Good Corporate Governance (GCG) comprises the following principles and mechanisms: transparency, accountability, responsibility, independence and fairness (Tricker, 2019). Whilst the principle of fairness protects the rights of all shareholders, including minority investors, the independence of the board of directors and commissioners ensures objective oversight. Research shows that the application of these GCG principles can improve a company's performance, both financially and non-financially. Good corporate governance can attract investors, reduce managerial risk, improve the efficiency of decision-making, and strengthen a company's reputation in the market (Daily et al., 2003; Gillan & Starks, 2003). Furthermore, several studies emphasise that although the effectiveness of GCG varies depending on company size, industry sector, and applicable regulations, GCG principles are generally used as a strategic foundation for enhancing business value and sustainability (Claessens et al., 2012; Shleifer & Vishny, 1997).

2.3. Value chain and firm performance

Porter (1985) first introduced the concept of the value chain as a set of corporate activities that add value to goods or services from start to finish. Companies can achieve efficiency, quality and competitive advantage through the value chain. Inbound logistics, operations, outbound logistics, marketing and sales, and service are the core activities. Logistics support encompasses corporate infrastructure, workforce management, technology development and procurement. Using a value chain approach, the key activities used to measure operational efficiency are inbound logistics, which relate to the management of raw materials. The indicators used include raw material cost efficiency, delivery timeliness, and inventory management. The outcome is the company's ability to reduce raw material procurement costs, ensure that raw materials arrive on time, and manage inventory effectively. In terms of operations (the production process), efficiency can be measured through production productivity, machine utilisation efficiency, and production lead times. This assesses how efficiently the process runs, whether machine utilisation is optimal, and how quickly production times meet targets. Distribution speed, distribution costs and delivery accuracy are metrics used in the outbound logistics

phase. These are reflected in a company's ability to control distribution costs, deliver goods to customers on time, and manage the distribution system effectively. However, in marketing and sales activities, efficiency is measured through marketing cost efficiency, sales effectiveness and sales conversion rates. These indicators can be observed through the efficient use of marketing expenditure, the success of marketing strategies in boosting sales, and the achievement of sales targets in the most effective manner. Furthermore, in service activities, the indicators used include customer satisfaction, service speed, and complaint handling. This is reflected in the level of customer satisfaction with the company's services, the speed with which complaints are handled, and the quality of after-sales service provided. In addition to core activities, there are also support activities that play a role in improving operational efficiency. In terms of corporate infrastructure, the indicators used are the efficiency of the management system and coordination between divisions, which can be seen in the smoothness of coordination and the support provided by the management system for work efficiency. In terms of human resource management, indicators include employee productivity and workforce competence, which are reflected in employees' ability to work productively and the suitability of their skills. Furthermore, in the technology aspect, the indicators used are the level of automation and the utilization of information systems, which can be seen from the extent to which technology is able to improve work efficiency and the optimization of information system usage. Finally, in the procurement aspect, the indicators include purchasing efficiency and supplier relationships, which are reflected in good relationships with suppliers and the implementation of efficient purchasing processes.

Companies can improve performance by implementing an effective value chain through optimising internal processes, reducing costs, increasing productivity, and enhancing customer satisfaction. For example, operational and distribution efficiency can lower production costs, whilst innovation in marketing and after-sales service can boost sales and customer loyalty (Porter, 1985; Barney, 1991). According to empirical studies, companies that systematically manage their value chains tend to have better financial performance, including improvements in Return on Assets (ROA), Return on Equity (ROE), and enterprise value. This is because they have the ability to generate greater value added than their competitors (Kaplan & Norton, 2004; Hitt et al., 2001).

The value chain thus serves as a vital framework for companies to determine what they need to identify the requirements for growing their business. This is because, through product innovation, technology adoption and the enhancement of human resource capabilities, the integration of core and supporting activities within the value chain has an indirect impact on company performance. This demonstrates that value chain management also enhances a company's competitiveness and sustainability.

2.4. Mediating role of value chain

The sequence of activities undertaken by a company to enhance the value of its products or services from start to finish is referred to as the value chain. This value chain encompasses core activities such as inbound logistics, operations, outbound logistics, sales and service, as well as support activities such as corporate infrastructure management, workforce management, technology development and procurement (Porter, 1985). In addition to serving as a tool for improving operational efficiency and effectiveness, the value chain can also act as a link between a company's strategic elements such as innovation, intellectual capital, and good corporate governance and its performance.

Studies show that managing value chain activities can help companies improve their performance. For example, effective management of intellectual capital can enhance oversight and accountability, as well as improve product quality, production efficiency and innovation throughout the value chain, thereby impacting both the financial and non-financial performance of the company (Barney, 1991; Hitt et al., 2001). In other words, the value chain serves as a means of aligning the impact of internal and external variables on business performance. Effective management of core and supporting activities can boost productivity, reduce costs, accelerate innovation, and enhance customer satisfaction. Consequently, the value chain acts as a strategic mediator in achieving sustainable corporate performance. Empirical studies increasingly emphasise that companies that pay attention to the integration and optimisation of the value chain tend to achieve better performance than those that focus solely on individual factors and fail to coordinate processes (Kaplan & Norton, 2004; Porter, 1985).

Resource-based view (RBV) is a strategic theoretical framework that emphasises that a business's competitive advantage stems from the management of internal resources that are valuable, rare, difficult to imitate, and non-substitutable (Barney, 1991). Resources in this context consist of physical assets, human capital, technology, processes, and intellectual capital owned by the company. Companies that can manage their internal resources effectively will gain a sustainable competitive advantage, which will result in improved performance compared to other companies (Wernerfelt, 1984). By developing strategies for innovation, operational efficiency, and human resource capabilities, the RBA emphasises the importance of leveraging a company's unique capabilities to enhance value and optimise internal processes.

Conversely, stakeholder theory emphasises the importance of business relationships and cooperation with stakeholders, including suppliers, customers, business partners, regulators and the community (Freeman, 1984). In addition to enhancing customer satisfaction and loyalty, stakeholder integration enables companies to obtain the external support, information and resources required to improve performance. This approach emphasises that business success depends not only on internal resources,

but also on the ability to build cooperative relationships with key stakeholders.

Combining the Resource-Based View (RBV) and stakeholder theory creates a robust theoretical framework for explaining corporate performance. The RBV provides an internal foundation through the management of distinct resources and capabilities, whilst stakeholder integration emphasises external factors such as cooperation and strategic relationships. According to several studies, combining the two can significantly improve business performance as firms can maximise the benefits of external relationships whilst leveraging internal strengths (Barney, 1991; Freeman, 1984; Hitt et al., 2001). Therefore, this framework can be used to examine how a company's productivity, profitability, innovation, and competitiveness are influenced by stakeholder integration and the management of internal resources simultaneously. It can therefore be concluded that the Resource-Based View (RBV), Stakeholder Theory and the Value Chain are three complementary approaches to explaining a company's competitive advantage and performance. The RBV explains what a company possesses, Stakeholder Theory explains with whom a company interacts, and the Value Chain explains how a company creates value. The integration of these three approaches is key to achieving sustainable competitive advantage in an era of global competition.

2.5. Hypothesis development

Intellectual capital, comprising human capital, structural capital and relational capital, has the strategic capacity to enhance business performance in the knowledge-based era and boost a company's competitive advantage (Khosnaw & Karadaş, 2024; Sardo et al., 2018). According to Intellectual Capital, innovation capabilities, operational efficiency and the quality of decision making can be effectively improved by leveraging knowledge assets (Alvino et al., 2021; Xu & Wang, 2018). Previous studies have shown that intellectual capital enhances business performance in both financial and non-financial terms, such as profitability, productivity, customer satisfaction and market value (Ge & Xu, 2021). Furthermore, from the perspective of the Resource-Based View, intellectual capital is regarded as a unique and difficult to imitate strategic resource, enabling companies to achieve a sustainable competitive advantage. Consequently, it is believed that a company's overall performance can be enhanced through the effective utilization of intellectual capital. Based on this description, the following hypothesis can be drawn:

H1: Intellectual capital positively impacts firm performance.

A company must be managed effectively and be able to meet the expectations of all stakeholders in order to survive. One key mechanism for ensuring that a company is run in a transparent, accountable and responsible manner towards its various stakeholders is the implementation of Good Corporate Governance (GCG) (Tjahjadi et al., 2021;

Singh & Rastogi, 2022). Companies must not only consider the interests of shareholders, but also those of all stakeholders: suppliers, the government, customers, employees and the community. Companies can maintain harmonious relationships with stakeholders and enhance trust, legitimacy and support for their activities by implementing sound corporate governance. Good relationships with these stakeholders will enhance customer satisfaction, loyalty and operational efficiency, which will ultimately lead to improved corporate performance (Dzulkifli et al., 2020). Furthermore, numerous empirical studies have shown that the effective implementation of GCG improves corporate performance in both financial and non-financial terms (Dzulkifli et al., 2020; Erena et al., 2022; Ma et al., 2024). Based on this explanation, the hypothesis put forward is:

H2: GCG has a positive effect on firm performance.

A company's competitive advantage can be achieved through activities that add value to its goods and services (Porter, 1985). A company is viewed as a set of integrated activities that create value through cost efficiency and differentiation. By effectively managing activities within the value chain, a company can optimise each of its business processes to generate greater value (Ndlovu et al., 2022). According to the Resource Based View, a company's ability to manage and utilise its resources optimally determines its competitive advantage. The value chain can be regarded as a mechanism for integrating and optimising these resources so that they become valuable capabilities that are difficult to imitate and capable of generating sustainable profits for the company. Companies can improve operational efficiency, reduce costs and create added value for customers by implementing an effective value chain. Ultimately, this will enhance the company's performance from both financial and non-financial perspectives, increase customer satisfaction and strengthen the company's competitive position. Furthermore, previous empirical research indicates that the implementation of a value chain enhances value creation and efficiency, thereby improving company performance (Hapsari et al., 2023; Ndlovu et al., 2022; Shin et al., 2009; Stofya, 2023). Based on this explanation, the hypothesis put forward is:

H3: Value chain improves firm performance.

In addition to the ownership of strategic resources, a company's performance is determined by how it manages those resources through effective and efficient operational activities. According to the Resource-Based View, intellectual capital is an intangible asset of strategic value that can provide a competitive advantage if managed correctly (Aman-Ullah et al., 2022; Chatterjee et al., 2023). Internal resources can be transformed into added value for customers, according to the Value Chain concept. In other words, the value chain links the management of intellectual capital to corporate performance. If every activity in the value chain makes effective use of intellectual capital, this will enhance efficiency, differentiation and, ultimately, corporate performance (Belton et al., 2021; Carlucci et al.,

2004; Suharman et al., 2023). Furthermore, GCG enhances the execution of activities within the value chain through improved oversight, coordination and accountability. By integrating GCG into operational activities, companies can ensure that business processes run in accordance with procedures and generate maximum value for customers and stakeholders, thereby improving corporate performance (Boeva, 2015; Hapsari et al., 2023). Based on this explanation, the proposed mediation hypothesis is:

H4a: Value chains act as a mediator between IC and firm performance.

H4b: Value chain acts as a mediator between GCG and firm performance.

Figure 1 shows the research model used in this study, illustrating the relationships between the variables.

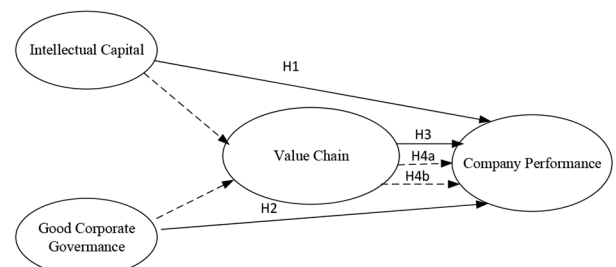


Figure 1. Research model

3. Methodology

This study employs a quantitative approach with an explanatory research design, aiming to analyse the influence of intellectual capital and good corporate governance (GCG) on firm performance, with the value chain acting as a mediating variable. The study utilizes primary data collected in a cross-sectional format, i.e., data obtained at a specific point in time. Data were collected using a structured questionnaire distributed both in person and online. Each statement was measured using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The population for this study consisted of Indonesian manufacturing companies. The sampling technique employed was purposive sampling, with the following criteria for respondents: (1) holding a position related to decision-making or financial management; (2) having an understanding of intellectual capital practices, good corporate governance (GCG), and value chain activities within the company. In this study, the unit of analysis is the company, meaning that each returned questionnaire represents a single company. Of the 200 questionnaires distributed, 60 were returned with complete responses, resulting in a response rate of 30%. Although this response rate is considered low by quantitative survey standards, this study maintains the validity of the analysis through several mitigation strategies. Firstly, the respondent companies encompass a range of key characteristics, such as company size, industry sector, and ownership status, ensuring the sample remains a

proportional representation of the population. Secondly, all received questionnaires were checked for completeness and their indicators were tested for validity and reliability prior to analysis. These steps reduce the potential for non-response bias, ensuring that the primary data obtained can still be used to analyse explanatory relationships between variables via SEM-PLS. The literature also indicates that in studies with the firm as the unit of analysis, a low response rate (around 30%) is acceptable provided that the sample analyses is sufficiently representative and appropriate statistical procedures are employed (Fowler, 2014; Baruch & Holtom, 2008). The companies selected as samples come from all industry sub sectors in the manufacturing industry sector, namely Basic Industry and Chemicals Sub-Sector, Miscellaneous Industries Sub Sector, Consumer Goods Industry Sub Sector. So that this amount is considered sufficient to represent the industry sector. Thus, this study can still produce valid empirical findings regarding the influence of intellectual capital and GCG on firm performance through the value chain. All respondents participated voluntarily and were provided with an explanation of the purpose of the research. The respondents' identities were kept confidential and the data collected was used solely for academic purposes.

The data were analysed using Partial Least Squares (PLS) based Structural Equation Modelling (SEM) with the aid of software. This method was chosen because it is capable of analysing complex relationships between variables and testing mediating effects simultaneously. Hypothesis testing was carried out using the bootstrapping technique to assess the significance of direct and indirect effects. The significance level used was 5% ($p < 0.05$).

Validity and reliability tests in this study were conducted as part of the evaluation of the outer model in the Partial Least Squares-based Structural Equation Modelling (SEM-PLS) approach. The validity tests included convergent validity and discriminant validity. Convergent validity was evaluated based on outer loading values, whereby each indicator was deemed to meet the criteria if it had a value greater than 0.60. In addition, the Average Variance Extracted (AVE) value was also used to reinforce the convergent validity test, with a recommended value greater than 0.50. Next, discriminant validity was tested to ensure that each construct in the model was sufficiently distinct from the others. This can be done by comparing the root-mean-square error of approximation (RMSEA) values with the Interco struct correlations, or by using the Heterotrait-Monotrait Ratio (HTMT) criterion. Reliability tests were conducted to assess the internal consistency of each construct using Cronbach's alpha and composite reliability. A construct is considered reliable if it has a Cronbach's alpha and composite reliability score above 0.70. As all these criteria have been met, it can be concluded that the research instrument possesses a good level of validity and reliability and is suitable for further analysis.

The measurement of variables in this study is based on the indicators of each variable. Human capital, structural

capital and relational capital are used in conjunction to assess the IC variable (Agyei-Mensah, 2018; Sharabati et al., 2010). Transparency, accountability, responsibility, and independence serve as indicators of GCG (Murni & Nengzih, 2018). Indicators, such as primary and support activities, are used to track value chain variables (Porter, 1985). The measurement of the value chain in this study emphasises operational efficiency; thus, in primary activities, it measures the efficiency of raw materials and inventory management, productivity and production process time, as well as distribution speed and costs. Supporting activities measure marketing efficiency and sales effectiveness, service speed and management systems. Financial and operational metrics are applied to measure company performance (Wang et al., 2021).

4. Research findings

Sample characteristics

Table 1 shows the demographic information of those who participated as the study subjects.

Table 1. Industry sub-sector analysis unit (source: results of questionnaire distribution)

Sub Sector	Respondents
Basic Industry and Chemicals Sub-Sector	9 companies
Miscellaneous Industries Sub-Sector	17 companies
Consumer Goods Industry Sub-Sector	34 companies
Total	60 companies

A Common Method Bias (CMB) test was used to avoid errors while measuring or assessing data. Based on the test results, the inner VIF value was below 3.3, which means there was no indication of CMB. To provide a quantitative depiction of the summary of data on each variable, descriptive analysis was conducted (Table 2).

Table 2. Descriptive statistics (source: result of data processing)

Construct	Mean
Intellectual Capital	3.95
Good Corporate Governance	4.38
Value Chain	3.93
Company Performance	3.89

Factor loading, reliability and validity test

Data processing was conducted with PLS-SEM, while the results of the convergent validity test were shown by the outer loading and average extracted variance (AVE) values. According to J. J. F. Hair et al. (2017), the outer loading and AVE values need to be at least 0.4 and 0.5, respectively. Based on the data collected, the outer loading value is ≥ 0.6 and AVE is ≥ 0.5 , respectively (Table 3).

Table 3. Resulting convergent validity (source: result of data processing)

Construct	Indicator	Item	Loading	AVE
Intellectual Capital	Human Capital	HC1	0.664	0.529
		HC2	0.796	
	Structural Capital	SC1	0.741	
		SC2	0.636	
	Relational Capital	RC1	0.787	
		RC2	0.725	
Good Corporate Governance	Transparency	TR1 TR2	0.671	0.611
	Accountability	AC1	0.839	
	Responsibilities	RS1	0.828	
	Independent	IN1	0.762	
	Reasonable and equal	RE1	0.794	
Value Chain	Main Activities	MA1	0.835	0.621
		MA2	0.844	
		MA3	0.817	
	Supporting Activities	SA1	0.712	
		SA2	0.720	
Company Performance	Financial Performance	FP1	0.808	0.691
		FP2	0.790	
		FP3	0.861	
	Operational Performance	OP1	0.880	
		OP2	0.815	

The Fornell-Larcker discriminant tests are used to determine whether a construct is greater in each row when the square root value is larger than those of other constructs (Ghozali & Latan, 2015), and the results are presented in Table 4.

Table 4. Fornell–Larcker test result (source: result of data processing)

	CG	IC	CP	VC
IC	0.781			
CP	0.687	0.727		
SI	0.553	0.619	0.831	
VC	0.734	0.676	0.741	0.788

Reliability tests were carried out in the evaluation process for the measurement models. The Cronbach’s alpha of each latent variable value was examined through a reliability test with a composite reliability of > 0.7. According to Cronbach’s alpha and rho_a > 0.6, surveys are reliable and consistent when used as teaching tools. Internal reliability consistency is correlated with higher composite reliability limits and lower Cronbach’s alpha (J. F. Hair et al., 2017). Table 5 shows the reliability test results presenting values of composite reliability, Cronbach’s Alpha, and rho_A to be greater than or equal to 0.7 respectively. Therefore, the data used in this investigation satisfied the criteria for both discriminant and concurrent validity.

Table 5. Test of reliability (source: result of data processing)

Construct	Composite Reliability	Cronbach’s Alpha	Rho_A
Intellectual Capital	0.870	0.821	0.826
GCG	0.886	0.839	0.847
Value Chain	0.891	0.846	0.855
Company Performance	0.918	0.889	0.896

Compliance of the estimated model with the outer model requirements (inner model) is followed by an evaluation of the structural model which aims to forecast the relationship between latent variables, according to F. Hair et al. (2017) the coefficient of determination (R-square value) was examined using the R-squared adjusted value obtained for the value chain. The R-square test applied an R-squared adjusted value because the study model included many endogenous pathways and was quite complex due to intervening variables. The company performance was 0.554, while the value chain was 0.580, and the dependent variable might be impacted by the contribution of the independent variables. According to Ketchen (2014), the Standardized Root Mean Square Residual (SRMR) value of 0.09 showed that the fit model had been certified due to the value being less than 0.10.

Table 6. Hypotheses testing result (source: result of data processing)

Hypothesis	Symbol	Original Sample	T-Statistics	P-Value	Conclusion
Direct Effect					
H1	IC→CP	0.247	2.298	0.011	Supported
H2	GCG→CP	-0.081	0.564	0.286	Unsupported
H3	VC→CP	0.633	5.497	0.000	Supported
Indirect Effect					
H4a	IC→VC→CP	0.206	2.137	0.016	Supported by Fully intervening variables
H4b	GCG→VC→CP	0.323	3.271	0.001	Supported by Fully intervening variables

Table 6 shows the results of the hypothesis testing conducted in this study by examining the p-value, t-statistics (bootstrapping), and path coefficient (J. F. Hair et al., 2017). Exogenous factors are considered to influence endogenous variables when the p-value is less than 0.05 with a 95% confidence range, according to (J. Hair et al., 2014). The obtained p-value was below 0.05, according to the results of the data processing conducted.

To determine the significant value between constructs, t-statistics (bootstrapping) were used (J. F. Hair et al., 2017). The suggested hypothesis had a limit of ± 1.64 for acceptance and support. The hypothesis was rejected or the null hypothesis (Ho) was accepted when the t-statistic value fell between -1.64 and 1.64.

5. Discussion

5.1. Intellectual capital positively impacts firm performance

The results of the first hypothesis testing indicate that firm performance is positive influenced by intellectual capital (IC) with a P-value of 0.011. These findings are consistent with previous research emphasizing the role of IC in enhancing firm performance through the management of strategic resources (Aman-Ullah et al., 2022; Bataineh et al., 2022; Githaiga et al., 2023; Massaro et al., 2020). Intangible assets, known as intellectual capital comprising human capital, structural capital and relational capital play a vital role in enhancing business performance through the creation of value based on knowledge and innovation that made significant contributions to the development of this concept, emphasising that organisational systems, customer relationships and employee capabilities can serve as sources of competitive advantage. According to previous research, intellectual capital can enhance operational efficiency, product innovation and the quality of decision making. For example, studies by Yusup (2024) found that intellectual capital has a positive correlation with a company's financial performance. Conversely, other studies, such as that by Firer and Williams (2003), have found that intellectual capital does not always have a significant impact on company performance, particularly in developing countries. The findings of this study differ, highlighting how companies manage, measure and utilise the knowledge they possess in support of its business strategy.

Intellectual capital (IC) influences a company's performance through the synergistic relationship between human capital, structural capital and relational capital. From an analytical perspective, human capital is the primary source of value creation as it generates knowledge and innovation; however, without structural capital capable of transforming that knowledge into processes, systems and measurable outputs, the performance of human capital will not be optimal. Thus, structural capital acts as a bridge between structural capital and human capital. On the other hand, relational capital acts as a catalyst that links a company's internal strengths to the market. Without good external relationships, the value generated from human and structural capital will not be maximized in improving performance, particularly in market and financial aspects. Therefore, the influence of intellectual capital on company performance is integrative and interdependent, whereby the simultaneous optimization of these three components is key to creating sustainable competitive advantage (Bontis et al., 2000; Olarewaju & Msomi, 2021).

The findings indicate that if they wish to improve their performance, businesses must manage their intellectual capital strategically. According to Keter et al. (2024), companies must not only focus on physical assets, but also on organisational systems, customer relationships and human resource development. Research has shown that without proper management, the benefits of intellectual capital are

not always significant. Consequently, organisations must implement optimal measurement and utilisation to enhance efficiency, innovation, and competitiveness.

5.2. Good Corporate Governance (GCG) does not have a positive impact on company performance

Meanwhile, the results of the second hypothesis test indicate that the implementation of GCG has no significant effect on company performance with a P-value of 0.286, in line with the findings of Nugroho (2020). This suggests that GCG functions more as a governance framework and operational procedures that ensure the company conducts its activities in accordance with established regulations, maintains business sustainability, and protects the interests of various stakeholders. From a stakeholder theory perspective, GCG is designed to meet the interests of stakeholders, including shareholders, employees, customers, suppliers, and regulators, rather than solely to directly improve financial performance. Therefore, GCG may not demonstrate a direct impact on company performance, particularly if governance implementation has not been accompanied by the optimization of strategic resources (Ma et al., 2024).

According to stakeholder theory, there are many reasons why research on the impact of corporate governance on company performance varies. In theory, corporate governance should improve performance as it balances the interests of various stakeholders, thereby fostering trust, loyalty and business sustainability. However, not all companies are able to implement these principles effectively.

One of the main causes is that the implementation of corporate governance remains largely a formality or merely a means of complying with regulations, and therefore does not truly accommodate the interests of stakeholders. Mechanisms such as audit committees or boards of commissioners fail to oversee and make decisions in such situations. Furthermore, differing company characteristics, such as size, ownership structure, and organisational culture, influence the effectiveness of GCG. Companies with concentrated ownership, for example, tend to have higher levels of conflict of interest, which means that the benefits of GCG are not maximised.

The institutional environment and varying levels of law enforcement across different countries or industries are additional factors. In developing countries, a lack of law enforcement can result in GCG practices not functioning as intended, thereby failing to have a significant impact on corporate performance. Although GCG is theoretically important for improving performance, inconsistent empirical results suggest that the success of GCG depends heavily on the quality of implementation, management commitment, and external support for monitoring and enforcing corporate governance.

This discrepancy with the findings of several previous studies, which identified the impact of GCG on performance, can be explained by variations in corporate context

and the degree of effectiveness of governance implementation. Whilst IC can be directly utilized to enhance performance, GCG is more instrumental and normative in nature, ensuring compliance and sustainability; consequently, its impact is more evident through mediating mechanisms or over the long term.

5.3. Value chain improves company performance

The third hypothesis results showed that the primary operations and supporting activities of the company were connected through the value chain used in all activities. The major activities would function effectively when fully backed up by the supporting activities (Xu & Liu, 2020). Companies need to be extremely aware of the primary tasks carried out to generate revenue for the main business (Suharman et al., 2023) suggest that supporting activities should be prioritized and supported by the main activities. These include maintaining equipment in good condition, choosing reputable suppliers for procurement procedures, gaining access to information technology that can support all activities, and possessing staff with the necessary expertise. When the products of the companies are better and superior to those manufactured by competitors, consumers are willing to pay more, leading to dominance in the market (Taghizadeh et al., 2014). This will impact the ability to operate by increasing sales and productivity, introducing new ideas, and meeting consumer demand for the products (Jahanshahi et al., 2012).

According to Porter (1985), the value chain concept explains that businesses create value through a series of interconnected activities. These include inbound logistics, operations, outbound logistics, marketing and sales, and after-sales service. The link to RBV in the manufacturing industry is evident in the role of resources at each stage. In inbound logistics, relationships with suppliers and management capabilities ensure efficiency. Production technology, automation, and a skilled workforce play a crucial role in determining product quality and costs during the operations stage. Outbound logistics also depends on effective distribution. In marketing and sales, brand strength and market understanding enhance product appeal. Meanwhile, good after-sales service boosts customer satisfaction and loyalty. RBV helps companies identify strategic resources that provide a competitive advantage.

5.4. The value chain mediates the effects of IC and GCG on firm performance

Based on the results of the testing of hypothesis H4a, intellectual capital (IC) influences firm performance through the value chain (Suharman et al., 2023). IC, as a company's intangible asset, comprises human capital, structural capital and relational capital that support operational activities. These resources are applied to both core and supporting activities within the value chain, thereby enabling the company to produce products with added value (VA) that

offer a competitive advantage over rival products. Consequently, consumers are willing to purchase these superior products, which in turn boosts sales and the company's overall performance.

In this study, the value chain serves as a complementary mediating variable, whereby IC has a significant influence on firm performance both directly and indirectly (J. F. Hair et al., 2017; Zhao et al., 2010). This indicates that IC is a strategic resource that enhances operational efficiency through the value chain, supporting the company in achieving superior performance. By integrating IC into the value chain, the company is able to produce superior products in terms of both quality and price, thereby strengthening its competitiveness in the market and long-term performance.

The value chain plays a crucial role as a mediator linking intellectual capital with corporate performance. Intellectual capital which encompasses human capital, structural capital and relational capital provides the knowledge, skills and organisational systems that form the foundation for all activities within the value chain. When a company is able to manage the value chain effectively, these intellectual assets can be utilised to enhance operational efficiency, product innovation, service quality and customer satisfaction. Thus, the influence of intellectual capital on company performance is not direct, but rather mediated by how the organisation's knowledge and capabilities are applied at every stage of the value chain. This underscores that the value chain is not merely an operational process, but also a strategic mechanism that channels the potential of intellectual capital to have a tangible impact on improving company performance.

Based on the results of the H4b hypothesis test, GCG has an indirect effect on company performance. GCG can have a positive effect on company performance, particularly when mediated by value chain effectiveness. GCG practices including transparency, accountability, responsibility, independence and fairness promote more appropriate decision-making and efficient resource management. When these GCG principles are consistently applied throughout all stages of the value chain, from raw material procurement to distribution and after-sales service, companies can improve operational efficiency, product quality, and customer satisfaction. Thus, the value created through the value chain serves as a conduit channelling the positive impact of GCG on corporate performance, demonstrating that the influence of GCG is not always direct, but can be maximised through effective value chain management.

When applied across all stages of the value chain from procurement to after-sales service sound GCG practices promote sound decision-making and efficient resource management. Consequently, GCG can enhance corporate performance. According to research conducted by Erena et al. (2022) GCG improves performance through process improvements and the coordination of activities. However, research by Nugroho (2020) found that GCG does not always have a significant effect, particularly when

implemented formally and not integrated with the value chain. This emphasises that GCG performance is highly dependent on how well governance principles are applied in every activity within the value chain.

The results indicate that, whilst GCG does influence business performance when mediated by the value chain, it is not sufficient for companies to merely apply governance principles in a formal manner. Management must also ensure that the principles of transparency, accountability and responsibility are consistently applied across every aspect of value chain operation, from raw material procurement and production through to distribution and after-sales service. These findings emphasise that the success of GCG depends heavily on the quality of its implementation at the operational level, rather than merely at the level of formalities or policy.

This study found that GCG influences corporate performance through the value chain, rather than directly. From a stakeholder theory perspective, this suggests that businesses which effectively implement GCG principles will be better able to meet the interests of stakeholders namely suppliers, investors, employees and customers by managing value chain activities in a more transparent, accountable and efficient manner. Ultimately, improvements made at every stage of the value chain will enhance the value received by stakeholders. Therefore, GCG serves as a mechanism to ensure that stakeholders' interests are accommodated within the company's operational processes, not merely through formal policies.

According to the Resource Based View (RBV), intellectual capital (IC) is a unique, difficult to imitate and valuable strategic resource. IC encompasses employee knowledge, organisational capabilities and innovation, which directly enhance a company's ability to compete and achieve higher performance. Furthermore, IC also contributes indirectly through internal mechanisms, for example by strengthening processes within the value chain, improving efficiency, product or service quality, and innovation, which in turn impact the company's performance.

As GCG serves as a framework for management and oversight, it does not always have a direct impact on performance. Across all operational activities, GCG enhances transparency, accountability and effective decision-making. GCG principles, applied throughout the value chain, ensure that every stage of production, distribution, and service is carried out efficiently and in accordance with standards, thereby delivering better performance. In other words, GCG acts as a mechanism to optimise the use of resources.

From the perspective of Stakeholder Theory, improving performance through IC and GCG benefits not only the company but also its stakeholders. IC enables the company to create value through innovation and service quality that benefits customers, employees and investors, whilst GCG ensures that this value is distributed fairly, transparently and sustainably. Thus, strong performance demonstrates the company's ability to meet the needs and expectations of its stakeholders.

The role of the value chain as a mediator in these findings is that of an operational bridge which translates GCG practices into tangible corporate performance, whilst optimising the utilisation of IC and ensuring value creation for stakeholders. Without the value chain acting as a mediator, the impact of GCG on performance would not be significantly apparent.

6. Conclusions

The results showed that IC had a direct and indirect effect on company performance which means that IC will influence the company's performance either through the value chain or without going through the value chain. GCG influences company performance indirectly, meaning that GCG affects company performance when mediated by the value chain.

Value chains that are strategically managed by companies can maximize the impact of IC and achieve better performance. This is because the value chain provides the structure and processes to utilize these resources, while IC provides the resources and capabilities. IC is not only an internal asset, but also a catalyst that enables companies to adapt and thrive in a business landscape. By optimizing human, structural, and relationship capital at every stage of the value chain, companies can create sustainable competitive advantage, improve financial and non-financial performance, and create long-term resilience amidst increasing uncertainty. Good governance enables companies to manage and optimize their value chains to generate economic benefits and positive impacts on the environment and society, which will strengthen their position in the long run.

Fundamentally, the value chain serves as a strategic roadmap that can be applied to companies in developing countries. By analyzing and optimizing each activity in their value chain, companies can improve efficiency, create competitive advantage, provide more value to customers, and make more informed decisions. This will ultimately lead to improved company performance in both financial and non-financial terms.

Significant theoretical and practical benefits were obtained from this study which suggested achieving good company performance through efficient planning of resources. From the perspective of Stakeholder Theory, improving performance through IC and GCG benefits not only the company but also its stakeholders. IC enables the company to create value through innovation and service quality that benefits customers, employees and investors, whilst GCG ensures that this value is distributed fairly, transparently and sustainably. Thus, strong performance demonstrates the company's ability to meet the needs and expectations of its stakeholders.

This study could serve as an inspiration for developing countries to enhance performance. Companies might enhance competitiveness over time, manage resources and risks more effectively, as well as gain a rise in investor

confidence and organizational value by practicing excellent corporate governance.

Implications of the results for companies engaged in the manufacturing industry sector include improving the quality of IC by (1) continuing to provide training to enhance skills and expertise for the human resources. (2) Increasing the provision of facilities for the development of resources. (3) Improving the quality of cooperation with suppliers to support the smooth running of production activities. (4) Continuing to improve the quality of good relationships to understand consumers desire and needs, thereby manufacturing acceptable products.

The results of the GCG variable provide implications including (1) The application of GCG principles forms the foundation for the formation of a system, structure, and corporate culture that are adaptable to changes in a competitive business environment and capable of establishing a dependable internal control and risk management system. Therefore, a high commitment is required to implement the principles at all organs and levels of the organization in a planned, directed, and measurable manner. This will enable the implementation of GCG to occur consistently and in accordance with required best practices. (2) GCG as an important part of the culture of companies should be implemented by all organs from the lowest to the top management level.

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