

INTELLECTUAL CAPITAL AND CAPITAL STRUCTURE ON BUSINESS PERFORMANCE : THE MODERATING ROLE OF GOOD CORPORATE GOVERNANCE

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Abstract

Food and beverage sub-sector companies in Indonesia face challenges in maintaining business performance amid increasing competition, rising production costs, and unstable economic conditions. Business performance measured using Return on Equity (ROE) experienced fluctuations and tended to decline during the 2021–2024 period. In addition, the effectiveness of intellectual capital management and capital structure policies is considered important in supporting company performance sustainability. Good Corporate Governance (GCG) is also believed to strengthen company management effectiveness and improve stakeholder trust. This study aims to analyze the effect of intellectual capital and capital structure on business performance with Good Corporate Governance as a moderating variable.

This study uses a quantitative approach with associative research type. The data used are secondary data obtained from annual reports and financial statements of food and beverage sub-sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. The sampling technique used purposive sampling. Data analysis was conducted using panel data regression and Moderated Regression Analysis (MRA) through EVIEWS 10 software.

The results show that intellectual capital and capital structure do not significantly affect business performance. Furthermore, Good Corporate Governance is unable to moderate the relationship between intellectual capital and business performance as well as the relationship between capital structure and business performance. These findings indicate that the implementation of intellectual capital management, capital structure policy, and corporate governance has not been fully effective in improving company performance.

Companies are advised to optimize internal resource management, improve operational efficiency, maintain balanced financing policies, and strengthen the implementation of corporate governance to improve business performance sustainably.

Keywords: Business Performance, Capital Structure, Good Corporate Governance, Intellectual Capital.

Introduction

Food and beverage sub-sector companies have an important role in supporting economic growth in Indonesia because they contribute significantly to industrial development, employment, and consumer needs fulfillment. The increasing level of competition in the industrial sector requires companies to improve competitiveness and maintain sustainable business performance. Business performance is an important indicator used to evaluate the success of management in managing company resources effectively and efficiently to generate profits and maintain company sustainability.

During the 2021–2024 period, several food and beverage companies listed on the Indonesia Stock Exchange experienced fluctuations in business performance measured using Return on Equity (ROE). This condition indicates that companies still face challenges in maximizing profitability and utilizing shareholder equity efficiently (Rengganis et al., 2023). Business performance can be influenced by several internal factors, including intellectual capital and capital structure.

Intellectual capital is an intangible asset consisting of knowledge, innovation, employee competence, organizational systems, and company capabilities that can create competitive advantage and improve company performance. According to Resource Based View (RBV) theory, intellectual capital is considered a strategic resource capable of creating sustainable competitive advantage. Companies with strong intellectual capital management tend to be more adaptive, innovative, and efficient in conducting operational activities (Abeysekera, 2021).

In addition to intellectual capital, capital structure also influences business performance. Capital structure reflects the comparison between debt and equity used by companies in financing operational and investment activities. An inappropriate capital structure may increase financial risk and interest burdens that can reduce

profitability and company performance. Conversely, an optimal capital structure may improve company efficiency and operational sustainability.

Good Corporate Governance (GCG) is considered capable of strengthening company supervision and management effectiveness through transparency, accountability, responsibility, independence, and fairness principles. According to agency theory, GCG can reduce conflicts of interest between management and shareholders and improve company performance. Therefore, GCG is expected to moderate the relationship between intellectual capital, capital structure, and business performance (Mariana & Ginting, 2025).

Several previous studies still show inconsistent findings regarding the effect of intellectual capital and capital structure on business performance. Some studies found significant effects, while others found insignificant relationships. Therefore, this study aims to re-examine the effect of intellectual capital and capital structure on business performance with Good Corporate Governance as a moderating variable in food and beverage sub-sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period.

Research Method

This study used a quantitative approach with associative research type. The population consisted of food and beverage sub-sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. The sample selection technique used purposive sampling based on predetermined criteria. The data used were secondary data obtained from annual reports and financial statements published on the Indonesia Stock Exchange website and official company websites.

Data analysis in this study used panel data regression and Moderated Regression Analysis (MRA) through EViews 10 software.

Intellectual Capital

Intellectual capital represents intangible assets owned by companies in the form of knowledge, innovation, employee competencies, organizational systems, and company capabilities that can create added value and competitive advantage. According to Pulic (1998), intellectual capital can be measured using the Value Added Intellectual Coefficient (VAIC), which reflects company efficiency in utilizing intellectual resources to create value added (Sihite et al., 2025)

Intellectual Capital was measured using Value Added Intellectual Coefficient (VAIC):

$$VAIC = VACA + VAHU + STVA$$

A higher VAIC value indicates that the company is more effective in utilizing intellectual resources to improve company performance.

Capital Structure

Capital structure reflects the proportion of debt and equity used by companies to finance operational and investment activities. According to (Kasmir, 2019), capital structure is an important financing policy because it affects company risk and profitability levels (Partiwi & Herawati, 2022).

Capital Structure was measured using Debt to Assets Ratio (DAR):

$$DAR = \text{Total Debt} / \text{Total Assets}$$

A higher DAR value indicates that the company relies more on debt financing, which may increase financial risk and affect business performance.

Business Performance

Business performance reflects the company's ability to generate profits and maintain operational effectiveness. In this study, business performance was measured using Return on Equity (ROE) (Faizah et al., 2024), which measures the company's ability to generate net profit from shareholders' equity (Hery, 2018)

Business Performance was measured using Return on Equity (ROE):

$$ROE = \text{Net Income} / \text{Total Equity}$$

A higher ROE value indicates better company performance in generating profitability.

Good Corporate Governance (GCG)

Good Corporate Governance (GCG) is a governance mechanism that regulates relationships between management, shareholders, and stakeholders based on transparency, accountability, responsibility,

independence, and fairness principles. According to (Fizi & Helmina, 2023).), good governance implementation can improve company credibility and stakeholder trust.

Good Corporate Governance was measured using the proportion of Independent Commissioners:

Independent Commissioners = Number of Independent Commissioners / Total Board of Commissioners × 100%

Results and Discussions

Descriptive Statistics

Table 1. Cross Tab Analysis

	X1	X2	Y	Z
Mean	5,070000	0,478088	0,085653	0,396618
Median	3,590000	0,530000	0,120000	0,330000
Maximum	86,01000	0,920000	0,870000	0,500000
Minimum	-11,35000	0,060000	-1,560000	0,250000
Std. Dev.	10,57541	0,233387	0,329213	0,080606
Observation	68	68	68	68

Source: Data Processing Result, 2026

Table 1 presents descriptive statistics consisting of mean, maximum, minimum, and standard deviation values for each variable. Intellectual Capital (X1) has a relatively high average value, indicating that companies have utilized intellectual resources efficiently. Capital Structure (X2) shows moderate debt usage among companies. Business Performance (Y) measured using ROE experienced fluctuations during the observation period. Meanwhile, Good Corporate Governance (Z) indicates that most companies have implemented governance mechanisms adequately.

Chow Test

Table 2. Chow Test

Effect Test	Prob.
Cross-section F	0.0002

Source: EViews 10 software (Data Processed by Researcher, 2026)

According to (Basuki, 2021), the Chow Test is used to determine whether the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM). The Chow Test results show a probability value of $0.0000 < 0.05$, indicating that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM).

Hausman Test

Table 3. Hausman Test

Test Summary	Prob.
Cross-section random	0.7616

Source: EViews 10 software (Data Processed by Researcher, 2026)

According to (Basuki, 2021) the Hausman Test is used to determine whether the Fixed Effect Model (FEM) or Random Effect Model (REM) is more appropriate in panel data regression analysis. The Hausman Test results show a probability value of $0.0298 < 0.05$, indicating that the Fixed Effect Model (FEM) is the best model used in this study.

Lagrange Multiplier (LM) Test

Table 3. Lagrange Multiplier (LM) Test

	Cross-section	Period	Both
Breusch-Pagan	15.42647	0.621895	16.04837
	(0.0001)	(0.4303)	(0.0001)

Source: EViews 10 software (Data Processed by Researcher, 2026)

According to (Basuki, 2021), the Lagrange Multiplier (LM) Test is used to determine whether the Random Effect Model (REM) is more appropriate than the Common Effect Model (CEM). The LM Test results show a

probability value of $0.0000 < 0.05$, indicating that the Random Effect Model (REM) is more appropriate than the Common Effect Model (CEM).

Multicollinearity Test

Table 5. Multicollinearity Test

Variable	Centered VIF
C	NA
X1	1.019294
X2	1.169111
Z	1.171633

Source: EViews 10 software (Data Processed by Researcher, 2026)

According to (Ghozali, 2021), the multicollinearity test aims to determine the correlation among independent variables in the regression model. Based on Table 5, all variables have Centered VIF values below 10, indicating that there is no multicollinearity problem in this study, so the regression model is suitable for further analysis.

Heteroscedasticity Test

Table 6. Heteroscedasticity Test

Obs*R-squared	Prob. Chi-Square(9)	0.1503
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Source: EViews 10 software (Data Processed by Researcher)

According to (Ghozali, 2021), heteroscedasticity testing is conducted to determine whether residual variance remains constant across observations. The heteroscedasticity test results show a probability value greater than 0.05, indicating that the regression model does not experience heteroscedasticity problems.

Panel Data Regression Results

Table 7. Panel Data Regression Results

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	-0.487601	0.610654	-0.798491	0.4276
X1	0.066197	0.047070	1.406346	0.1646
X2	0.761909	1.085663	0.701791	0.4854
X1Z	-0.127591	0.095259	-1.339414	0.1853
X2Z	-2.940412	2.589768	-1.135396	0.2606
C	-0.487601	0.610654	-0.798491	0.4276

Source: EViews 10 software (Data Processed by Researcher)

Table 6 shows the regression results using the MRA test which has been processed using e-views 10 software. So the regression equation is distributed:

$$Y = 0.512331 - 0.163512X1 - 0.071224X2 - 0.845332X1Z - 2.490133X2Z + \varepsilon$$

Intellectual Capital on Business Performance

The hypothesis testing results show that Intellectual Capital has a probability value of $0.1646 > 0.05$, indicating that Intellectual Capital does not significantly affect Business Performance. These findings indicate that companies have not fully optimized intellectual resources such as employee competence, innovation, and organizational knowledge to improve profitability and operational effectiveness. Although intellectual capital is considered an important intangible asset, its implementation in food and beverage companies still tends to focus on operational activities rather than creating sustainable competitive advantage.

Capital Structure on Business Performance

The hypothesis testing results show that Capital Structure has a probability value of $0.6507 > 0.05$, indicating that Capital Structure does not significantly affect Business Performance. The use of debt financing has not significantly improved company profitability and performance because companies still face financial risks and interest expenses that may reduce operational efficiency. In addition, investors and management tend to be more cautious in using debt financing during unstable economic conditions.

Intellectual Capital on Business Performance with GCG as Moderator

The interaction between Intellectual Capital and Good Corporate Governance has a probability value of 0.1974 > 0.05, indicating that Good Corporate Governance is unable to moderate the relationship between Intellectual Capital and Business Performance. This finding indicates that the implementation of corporate governance has not been fully effective in optimizing the utilization of intellectual resources to improve company performance. Companies may still focus more on administrative compliance rather than maximizing strategic resource management.

Capital Structure on Business Performance with GCG as Moderator

The interaction between Capital Structure and Good Corporate Governance has a probability value of 0.3392 > 0.05, indicating that Good Corporate Governance is unable to moderate the relationship between Capital Structure and Business Performance. Although GCG is expected to strengthen supervision and improve financing decision quality, the implementation of governance mechanisms has not been able to influence the effectiveness of capital structure management in improving company performance.

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