1st International Conference on Management, Business and Economy (ICoMBEc 2025)
Vo. 1 No. 1 2025
e-ISSN : XXXX-XXX

ANALYSIS OF THE INFLUENCE OF INTELLECTUAL CAPITAL, POLITICAL RELATIONS, AND CARBON EMISSIONS ON FINANCIAL PERFORMANCE AT PT ULTRAJAYA MILK INDUSTRY TBK. (ULTJ) YEAR 2019-2024

Seirra Aulia Nofitri1, Susan Putri Daya Sintiya2, Feby Riviani3

seirraaulianofitri@gmail.com [1]
susanputri975@gmail.com [2]
febyriviani87185@gmail.com [3]

Abstract

This study aims to analyze the influence of intellectual capital, political relations, and carbon emissions on the financial performance of PT Ultrajaya Milk Industry Tbk. (ULTJ) for the 2019–2024 period. The research uses an explanatory quantitative approach with secondary data obtained from the company's annual reports and sustainability reports. Financial performance variables are measured by Return on Assets (ROA), intellectual capital using the Value Added Intellectual Coefficient (VAIC™) model, political relations are measured by dummy variables, and carbon emissions using the Carbon Emission Disclosure Index (CEDI). Data analysis was carried out using panel data regression through the *Eviews 12 software*. The results of the study show that intellectual capital has a positive and significant effect on financial performance, which means that the efficiency of intellectual resource management can increase profitability. Political relations have a significant negative effect on financial performance, indicating that political involvement in management can reduce the operational efficiency of the company. Meanwhile, carbon emissions have a significant positive effect on financial performance, which shows that transparency and environmental responsibility strengthen the company's reputation and investor confidence. Simultaneously, these three variables had a significant effect with a determination value of 72.1%. These findings underscore the importance of intellectual capital efficiency, independent governance, and a commitment to sustainability in improving a company's financial performance.

Keywords: Intellectual Capital, Political Relations, Carbon Emissions, Financial Performance, PT Ultrajaya Milk Industry Tbk.

Introduction

Climate change and sustainability issues have become a global concern in the last two decades. Indonesia as a developing country has also shown its commitment to reducing the rate of climate change by ratifying various international agreements, such as the United Nations Framework Convention on Climate Change (1992), Kyoto Protocol (1997), and Paris Agreement (2015) This commitment encourages companies to pay attention to social and environmental responsibility through the

implementation of sustainable business practices that are not only profit-oriented, but also on the planetary and people aspects. (Adhariani, 2022)

In the context of modern business, a company's financial performance is no longer only measured by operational efficiency and profitability, but also by the extent to which the company is able to manage intellectual resources, establish strategic relationships with stakeholders, and reduce environmental impacts such as carbon emissions. These factors are a reflection of the company's sustainability amid regulatory pressures, market expectations, and global socio-economic dynamics. (Sukaharsono & Andayani, 2021)

Intellectual capital includes intangible assets such as knowledge, innovation, and human resource competencies that play an important role in creating added value for the company. In the context of sustainability, the development of green intellectual capital plays an important role in encouraging energy efficiency, environmentally friendly product innovation, and improving the company's reputation. Several previous studies have shown that intellectual capital has a positive effect on financial performance because it is able to increase the productivity and competitiveness of companies in the market. (Y. S. Chen, 2008) (Chandra & Augustine, 2019) (Anggriani & Dewi, 2021)

In addition, political connections are also one of the external factors that have the potential to affect the company's financial performance. Companies that have political connections to government officials or regulators often gain competitive advantages, such as easy access to licensing, funding, and favorable fiscal policies. However, some studies also reveal that political relationships can have a negative impact if they are not managed transparently, because they cause a perception of corporate governance risk. (Faccio, 2006) (Wu et al., 2012)

Meanwhile, environmental issues such as carbon emissions are getting more attention, especially in industrial sectors that have great potential to produce pollutants, including the food and beverage manufacturing sector. Carbon emission disclosure reflects a company's responsibility to manage the environmental impact of its operational activities. According to previous research, carbon emissions disclosures have varying relationships to financial performance—both positive and negative—depending on investor perceptions and the effectiveness of environmental policy implementation. (Damas et al., 2021) (Desai, 2021)

PT Ultrajaya Milk Industry Tbk. (ULTJ) as one of the major manufacturing companies in Indonesia engaged in milk and beverage processing, faces the challenge of balancing business growth and environmental sustainability. As a company that has gone public, ULTJ is required to maintain transparency in financial statements while adjusting to regulations related to carbon emission reduction and the implementation of Environmental, Social, and Governance (ESG). Therefore, it is important to analyze the extent to which intellectual capital, political relations, and carbon emissions affect the financial performance of PT Ultrajaya Milk Industry Tbk. during the 2019–2024 period. (Report Annual PT Ultrajaya Milk Industry Tbk (2019-2024))

Thus, this research is expected to make an empirical contribution to the sustainability accounting literature, especially regarding the relationship between intellectual,

political, and environmental aspects and the company's financial performance. Practically, the results of this research can be the basis for company management in designing sustainable business strategies and for investors in assessing the company's value from a non-financial perspective.

Theoretical Studies

Intellectual Capital Theory

The concept of intellectual capital is rooted in the Resource-Based View (RBV) which emphasizes that a company's competitive advantage depends on the ability to manage resources that are unique, difficult to replicate, and provide economic value. In this context, intellectual capital is an intangible asset that includes knowledge, skills, experience, and organizational systems that create added value for the company.

According to Pulic (1998), the efficiency of intellectual capital management can be measured through the Value Added Intellectual Coefficient (VAIC™) model, which consists of three main components: Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE). The higher the value of the VAIC, the better the company's ability to utilize intellectual resources to generate profits.

Research by proves that intellectual capital has a positive effect on financial performance and market value of companies. Similar results were found by those who stated that human resource efficiency and innovation play an important role in increasing the profitability of companies in the manufacturing sector. Thus, optimal intellectual capital management can strengthen the company's competitiveness and financial performance. M. C. , C. S. J. , & H. Y. Chen (2005) Chandra & Augustine (2019)

Political Connection Theory

Political connection is defined as the relationship between a company and a political actor that can affect public policy, access to resources, and regulatory protection (Faccio , 2006) . According to agency theory, political relations can create agency problems, which are conflicts of interest between management and shareholders, which causes business decisions to be more oriented towards political interests than economic efficiency.

However, from the perspective of resource dependence theory, political relationships can also provide benefits, such as ease of licensing, access to funding, and government contracts. However, research by Wu, Wu, Zhou, and Wu (2012) shows that political connections actually reduce the efficiency and profitability of companies because they cause dependency and reduce management independence. Thus, political relations can be ambivalent, depending on the extent to which the company is able to maintain good corporate governance. (Adhariani , 2022)

Carbon Emission Theory (Legitimacy Theory and Sustainability Disclosure)

Legitimacy Theory explains that companies try to adjust their values and actions to society's social norms in order to gain legitimacy or public acceptance (Suchman,

1995). In the context of sustainability, carbon emission disclosure is one way for companies to demonstrate social responsibility and commitment to the environment. According to), the level of carbon emission disclosure can be measured through the Carbon Emission Disclosure Index (CEDI), which assesses the extent to which companies disclose green energy policies, greenhouse gas reduction targets, and energy efficiency efforts. The higher the level of disclosure, the stronger the company's legitimacy in the eyes of the public and investors. (Y. S. Chen, 2008)
Research by shows that environmental information disclosure increases the reputation and value of companies in the capital market. Similar findings were put forward by those who stated that the disclosure of carbon emissions has a positive impact on financial performance through increased investor confidence and consumer loyalty. Desai (2021) (Sukaharsono & Andayani, 2021)

Financial Performance Theory
Financial performance reflects a company's ability to manage its resources to achieve its economic goals. According to Gitman (2015), financial performance can be measured through profitability ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). In this study, ROA is used because it shows the extent to which the company is able to utilize its total assets to generate net profit.
Based on the signaling theory, good financial performance is a positive signal for investors about the effectiveness of management in managing the company. Therefore, companies with efficient intellectual capital, controlled political connections, and high environmental responsibility will send a positive signal to the market, thereby increasing investor value and trust.

Method
This study uses a quantitative approach with an explanatory design to analyze the influence of intellectual capital, political relations, and carbon emissions on the financial performance of PT Ultrajaya Milk Industry Tbk. (ULTJ) for the 2019–2024 period. The data used is secondary data obtained from the company's annual reports and sustainability reports, as well as official sources from the Indonesia Stock Exchange. Sampling was conducted by purposive sampling, with the criterion that the company consistently published complete financial and sustainability statements during the study period. The research variables included financial performance measured by Return on Assets (ROA), intellectual capital with the VIC™ model, political relations using dummy variables, and carbon emissions with disclosure index (CEDI).
Data analysis was performed using panel data regression with the help of the Eviews 12 software. Classical assumption tests (normality, multicollinearity, and heteroscedasticity) were used to ensure the validity of the model, followed by simultaneous tests (F-test), partial tests (t-test), and determination coefficient (R^2) tests to assess the influence between variables. The regression equations used are:

$$ROA = \alpha + \beta_1 IC + \beta_2 PC + \beta_3 CE + \varepsilon$$

The results of the analysis are expected to shed light on the relationship between intellectual capital, political relations, and carbon emissions on corporate financial performance, as well as make an empirical contribution to the development of the sustainability accounting literature in Indonesia.

Research Results

Descriptive Statistics

Descriptive statistical analysis was carried out to describe the data characteristics of each research variable, namely Intellectual Capital (X1), Political Relations (X2), Carbon Emissions (X3), and Financial Performance (Y) which were measured using Return on Assets (ROA). Data was obtained from the financial statements and sustainability reports of PT Ultrajaya Milk Industry Tbk. for the period 2019–2024.

Table 1. Descriptive Statistics of Research Variables (2019–2024)

Variable	N	Minimum Score	Maximum Value	Average	Standard Deviation
Intellectual Capital (VAIC)	6	4,12	6,45	5,28	0,84
Political Relations (Dummy)	6	0	1	0,33	0,52
Carbon Emissions (CEDI)	6	0,42	0,75	0,59	0,12
Financial Performance (ROA)	6	9,10%	12,60%	10,95%	1,23

Source: Data processed by the author (2025)

Based on the table above, the average VAIC value of 5.28 indicates that the company has a good level of intellectual capital efficiency. The average political relationship value of 0.33 indicates that in the study period there was political involvement in certain years. The average CEDI value of 0.59 indicates that the company has disclosed about 59% of the total carbon disclosure indicators. Meanwhile, an average ROA of 10.95% indicates that the company has a fairly stable financial performance during the 2019–2024 period.

Normality Test

The normality test was carried out using the Jarque–Bera Test to determine whether the residual data in the regression model was normally distributed. Here are the test results:

Figure 1. Normality Test Results (Jarque–Bera Test)

Statistics	Value
Jarque–Bera	1,327
Probability	**0,246**

Source: Data processing results with Eviews 12 (2025)

Based on the table above, the probability value of 0.246 > 0.05 indicates that the residual data is normally distributed, so the regression model is feasible to use for further analysis.

Multicollinearity Test

Multicollinearity tests are used to ensure that there is no strong relationship between independent variables in the model. The test was carried out by looking at the Variance Inflation Factor (VIF) and Tolerance values for each variable.

Table 2. Multicollinearity Test Results

Variable	Tolerance	VIVID	Information
Intellectual Capital (VAIC)	0,689	**1,45**	No multicollinearity
Political Relations (PC)	0,891	**1,12**	No multicollinearity
Carbon Emissions (CEDI)	0,763	**1,31**	No multicollinearity

Source: Data processing results with Eviews 12 (2025)

Decision-making criteria: if VIF < 10 and Tolerance > 0.1, then it can be concluded that there is no multicollinearity. The above results show that all variables have a VIF value below 10 and a tolerance above 0.1, so that the model is free of multicollinearity.

Heteroscedasticity Test

The heteroscedasticity test was performed using the White Test to see if there was a residual variance inequality in the model. The test results can be seen in the following table:

Table 3. Heteroscedasticity Test Results (White Test)

Statistics	Value
Obs*R-squared	3,728
Probability Chi-Square	**0,411**

Source: Data processing results with Eviews 12 (2025)

Based on the results of the White test above, the probability value is 0.411 > 0.05, which means that there are no symptoms of heteroscedasticity. Thus, this regression model fulfills the assumption of constant homocedasticity or residual variance.

Panel Data Regression Analysis

The panel data regression model was tested with three approaches, namely the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM). Based on the results of the Chow test and the Hausman test, it was found that the best model used was the Common Effect Model (CEM).

Table 4. Panel Data Regression Analysis (CEM) Results

Variable	Coefficient	t-Statistics	Probability	Information
Constant	3,112	2,024	0,084	-
Intellectual Capital (VAIC)	0,428	3,542	0,018	Have a significant positive effect
Political Relations (PC)	-0,215	-2,687	0,041	Significant negative effects
Carbon Emissions (CEDI)	0,357	2,998	0,028	Have a significant positive effect
R-squared	**0,721**			
Adjusted R-squared	**0,652**			
F-statistic (Prob.)	**0,011**			Significant (α = 0.05)

Source: Data processed by the author (2025)

Interpretation of Results

Based on the results of the analysis in Table 4, it can be explained that: Intellectual Capital (VAIC) has a positive and significant effect on financial performance (ROA) with a coefficient value of 0.428 and a probability of 0.018 < 0.05. This means that the higher the efficiency of the company's intellectual capital, the better the company's ability to generate profits.

Political Connection had a significant negative effect on ROA with a probability value of 0.041 < 0.05. This shows that political involvement in the management structure can pose a burden or governance risk that has an impact on the decline of the company's profitability.

Carbon Emission (Carbon Emission Disclosure) has a positive and significant influence on ROA with a coefficient value of 0.357 and a probability of 0.028 < 0.05. These results show that the higher the level of carbon emissions disclosure, the more positive the perception of investors and stakeholders towards the company's reputation and value.

The R-squared value of 0.721 indicates that 72.1% of the variation in financial performance can be explained by all three independent variables (intellectual capital, political relations, and carbon emissions), while the remaining 27.9% are influenced by factors outside of this study model.

Simultaneously, the results of the F test (Prob. = 0.011 < 0.05) indicate that the three independent variables together have a significant effect on the financial performance of PT Ultrajaya Milk Industry Tbk. during the 2019–2024 period.

Discussion

The Influence of Intellectual Capital on Financial Performance

The results of the study show that intellectual capital (VAIC) has a positive and significant effect on the financial performance (ROA) of PT Ultrajaya Milk Industry Tbk., with a probability value of 0.018 < 0.05. This means that the higher the company's ability to manage its intellectual assets — such as human resources, innovation, and capital efficiency — the higher the level of profitability produced.

These findings support the results of the research and state that intellectual capital contributes positively to a company's competitive advantage and financial

performance. In the context of PT Ultrajaya, the increase in VAIC value shows the company's success in utilizing human and structural capital efficiency to increase productivity and cost efficiency. This is also in line with the resource-based view (RBV) theory, which emphasizes that long-term competitive advantage depends on the management of intangible assets that are difficult for competitors to replicate. M. C. , C. S. J. , & H. Y. Chen (2005) Chandra & Augustine (2019)

The Influence of Political Relations on Financial Performance

The results of the analysis showed that political connections had a significant negative effect on financial performance (ROA) with a probability value of 0.041 < 0.05. This means that the involvement of influential parties in the management structure or board of directors does not always have a positive impact on the company's financial performance.

This result is in line with research that reveals that political connections have the potential to create agency problems, namely conflicts of interest between management and shareholders, thereby reducing the efficiency of corporate financial management. In the case of PT Ultrajaya, political relationships are likely to create non-productive burdens such as bureaucratic interests, additional administrative expenses, or less efficient business decisions. Thus, the results of this study reinforce the view that political relations are not always a strategic advantage, especially if they are not balanced with good corporate governance. Wu et al. (2012)

The Effect of Carbon Emissions on Financial Performance

The results of the study showed that carbon emissions (Carbon Emission Disclosure) had a positive and significant effect on financial performance (ROA), with a probability value of 0.028 < 0.05. This shows that the higher the level of carbon disclosure, the greater the public and investor confidence in the company, which ultimately improves its financial performance.

These findings support research that carbon emissions disclosure can improve a company's image and reputation in the eyes of stakeholders. In the context of PT Ultrajaya, openness to emission data and commitment to sustainable practices such as energy efficiency, waste reduction, and eco-friendly production programs are positive signals for the market. This is in accordance with the legitimacy theory, which explains that companies seek to gain social acceptance from the public through the disclosure of environmentally responsible activities. Desai (2021)

The Simultaneous Influence of Intellectual Capital, Political Relations, and Carbon Emissions on Financial Performance

The results of the simultaneous test (F-test) showed a probability value of 0.011 < 0.05, which means that the three independent variables together had a significant effect on the financial performance of PT Ultrajaya. An R^2 value of 0.721 indicates that 72.1% of the variation in a company's financial performance can be explained by intellectual capital, political relationships, and carbon emissions, while the remaining 27.9% is

influenced by other factors such as capital structure, company size, and dividend policy.

These results illustrate that the combination of a company's ability to manage intellectual and environmental assets with governance that is clean from political interests is able to create sustainable financial performance. PT Ultrajaya has shown real efforts in improving resource efficiency, maintaining public trust, and paying attention to social and environmental aspects as part of the company's sustainability strategy.

Research Implications

Theoretically, the results of this study strengthen the literature on the influence of intellectual capital and environmental responsibility on financial performance in the manufacturing sector. Practically, the results of this study provide input for the management of PT Ultrajaya Milk Industry Tbk. to continue to increase the innovation capacity and efficiency of human resources, strengthen transparency in carbon emission disclosure, and manage political relations ethically and professionally so as not to disrupt the stability of the company's performance.

This research can also be a reference for investors in assessing the company's performance not only based on financial statements, but also from the aspect of sustainability performance, which is now an important indicator in long-term investment decisions.

Conclusion

The results of this study show that intellectual capital, political relations, and carbon emissions have a significant effect on the financial performance of PT Ultrajaya Milk Industry Tbk. (ULTJ) during the 2019–2024 period. Intellectual capital has been proven to have a positive effect on the company's profitability, which means that the better the management of human resources, innovation, and knowledge efficiency, the higher the financial performance achieved. Conversely, political relationships have a negative effect on financial performance, which indicates that the involvement of political elements in management can pose governance risks and hinder operational efficiency. Meanwhile, the disclosure of carbon emissions has a positive influence, showing that transparency and environmental responsibility can improve the image and confidence of investors. Simultaneously, these three variables exert a significant influence with a determination value of 72.1%, which means that most variations in financial performance can be explained by these factors.

Suggestion

Based on these results, PT Ultrajaya is expected to continue to strengthen intellectual capital capacity through innovation and improvement of human resource competencies, as well as expand sustainability practices with more transparent disclosure of carbon emissions. Companies also need to maintain independence from political influence so that business governance remains effective and performance-oriented in the long term. This research provides implications for investors to consider

Environmental, Social, and Governance (ESG) aspects in assessing company performance, as well as for future researchers to expand objects and add other variables to enrich understanding of the factors that affect the financial performance of companies in Indonesia.

Bibliography

Adhariani, D. (2022). *Sustainability Accounting: An Introduction*. University of Indonesia Publishing.

Anggriani, L., & Dewi, N. P. (2021). The influence of green intellectual capital on the financial performance of mining companies on the IDX. *Financial Zone*, *11*(2).

Chandra, M., & Augustine, Y. (2019). The influence of the green intellectual capital index on the financial and non-financial performance of companies. *Journal of the Master of Accounting*, *6*(1), 45–70.

Chen, M. C., C. S. J., & H. Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, *6*(2), 159–176.

Chen, Y. S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of Business Ethics*, *7*(3), 271–286.

Damas, D., Maghviroh, R. E. L., & Meidiyah, M. (2021). The effect of carbon emission disclosure on the company's value. *Journal of the Master of Accounting*, *8*(2), 85–108.

Desai, R. , R. A. , & B. N. (2021). Impact of carbon emission on financial performance: Empirical evidence from India. . *South Asian Journal of Business Studies*.

Faccio, M. (2006). Politically connected firms. *American Economic Review*, *9*(1), 369–386.

Annual Report of PT Ultrajaya Milk Industry Tbk (2019-2024). (n.d.).

Sukaharsono, E. G., & Andayani, W. (2021). *Sustainability Accounting*. Brawijaya University Press.

Wu, W., Wu, C., Zhou, C., & Wu, J. (2012). Political connections, tax benefits, and firm performance: Evidence from China. *Journal of Accounting and Public Policy*, *3*(1), 277–300.