UDC 332

THE ROLE OF INTELLECTUAL CAPITAL IN MEDIATING THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND COMPANY VALUE

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ABSTRACT
This study seeks to complement the literature and previous research by examining the mediating role of Intellectual capital on the relationship between corporate governance and firm value in primary consumer goods industrial sector companies on the Indonesia Stock Exchange. The population in this study is all companies in the primary consumer goods industry sector for the period 2017-2020. There are 44 companies that meet the criteria as a sample with 4 years of observation so that the total sample obtained is 176 samples. The data analysis technique used in this research is path analysis. The results of this study indicate that the size of the board, independent commissioners, CEO duality, ownership concentration, has a positive and significant effect on firm value. Intellectual capital is able to act as a mediating variable in the influence of board size, independent commissioners, CEO duality, and ownership concentration on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the 2017-2020 period.

KEY WORDS
Intellectual capital, corporate governance, value of the company.

Companies listed on the Indonesia Stock Exchange show a decline in company value. This study will focus on the decline in firm value in companies in the primary consumer goods sector (consumer non-cyclicals sector). The Primary Consumer Goods sector includes companies that produce or distribute products and services that are generally sold to consumers that are anti-cyclical or primary/basic goods so that the demand for these goods and services is not affected by economic growth, such as primary goods retail companies, food stores, drug stores, supermarkets, beverage manufacturers, packaged foods, sellers of agricultural products, cigarette manufacturers, household goods, and personal care goods (Indonesian Stock Exchange, 2021). The industrial market capitalization in the primary consumer goods sector as of December 30, 2020 reached Rp. 1,080,865,085,370,190,- (15.5% of the total market capitalization of the Indonesia Stock Exchange) where this sector is the industry with the second largest market capitalization after the financial sector which reached Rp. 2,632,737,083,721,390,- (Indonesian Stock Exchange, 2021).

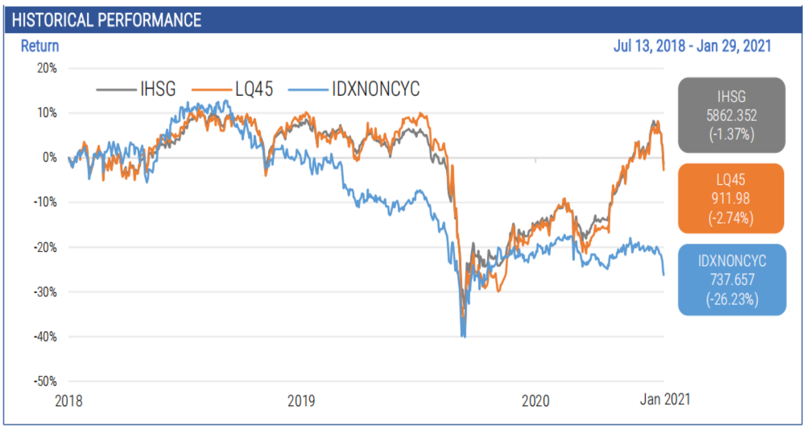

Figure 1 – JCI, LQ45 and Non-Cyclical stock returns for the period 13 July 2018 to 29 January 2021 (Source: www.idx.co.id)

Based on Figure 1, the stock returns of companies in the non-Cyclical sector appear to have experienced a deeper decline when compared to the composite stock price index (CSPI) and the LQ45 index. The company's stock return in the Primary Consumer Goods sector from July 2018 to January 2021 fell by -26.23% while the JCI and LQ45 fell -1.37% and -2.74%, respectively. Then, when viewed from the value of the company, which is measured using Tobin's Q, the same phenomenon also occurs.

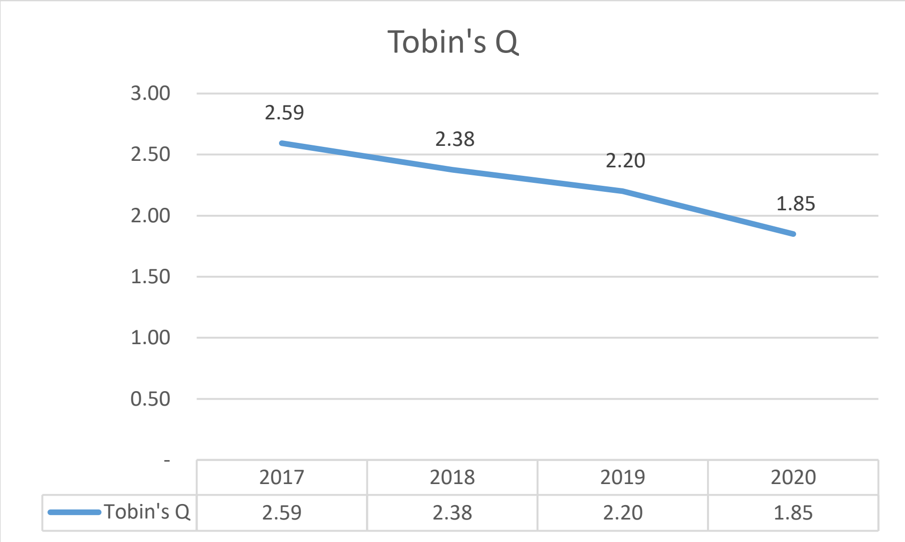

Figure 2 – Average Tobin's Q of companies in the non-cyclical consumer sector from 2017 to 2020 (Source: Company Annual Report, processed)

The decline in stock returns and firm value in the primary consumer goods industry sector can be seen as a phenomenon. Companies in the primary consumer goods industry sector are theoretically anti-cyclical. Ideally, the value of the company experiences growth or at least is stable every year. The decline in Tobin's Q can be seen in Figure 1-2, the company's average Tobin's Q in the 2017-2020 period actually decreased from 2.59 in 2017 to 1.85 in 2020.

The value of the company deserves to be re-examined because there are factors that cannot be shown in the financial statements that can lead to a gap in the value of the company between as reported in the financial statements and market value. The decline in the value of the company is thought to have occurred because there are other factors that influence other than the influence of the financial statements. Lev and Zarowin (1999) argue that companies have several assets that cannot be recorded in financial statements such as management or corporate governance, reputation and prospects that can affect the company's performance. Financial information is considered less successful in describing the existence of intangible asset values, which creates information asymmetry between companies and users of information, and creates inefficiencies in the process of resource allocation in the capital market. Corporate governance and other intangible assets that cannot be recorded in financial statements are now increasingly being considered as the main driver for company value that wants to increase competitive advantage and reduce agency problems (Buallay and Hamdan, 2019)

This research will examine the effect of corporate governance on the value of companies in Indonesia, especially companies in the primary consumer goods industry sector. Corporate governance is a control and supervision system whose purpose is to maximize company performance without harming stakeholders (OECD, 2004). Aboagye and Otieku (2010) in Puni and Anlesinya (2020) state that corporate governance means the systems, mechanisms, processes and structures by which companies are controlled and directed.

Ciftci et al. (2019) and Borochin and Cu (2018) in their research suggest that corporate governance practices in developing countries are very weak. Weak implementation of corporate governance practices has been identified as one of the causes of the global financial crisis. Improving the implementation of corporate governance practices in issuers and public companies in Indonesia is currently a top priority (Financial Services Authority, 2014). Good corporate governance is still one of the weaknesses of most companies in Indonesia. One of the causes of the economic crisis at the end of the 90s was due to poor corporate governance, among others in the form of poor investment quality, extensive business diversification, the large number of short-term unhedged loans, the weak role of directors and commissioners. , poor audit system, lack of transparency, and weak law enforcement (Coordinating Ministry for Economic Affairs, 2021).

Several companies in the primary consumer goods industry sector experienced a decline in company value and it is estimated that the implementation of corporate governance is still weak. Two directors of PT. Three Pillars of Prosperous Food Tbk. (currently changed to PT. FKS Food Sejahtera Tbk.) was proven to have committed a violation by manipulating the company's financial statements for the 2017 financial year with the motive to raise the company's share price at that time. Both are suspected of violating Article 95 of Law Number 8 of 1995 concerning the Capital Market. Investors suffered losses due to the violation where the stock price of AISA from the previous up to Rp. 2000 per share dropped drastically to Rp. 200 per sheet (www.antaranews.com). PT. Indofood CBP Sukses Makmur Tbk. (ICBP) and PT. Indofood Sukses Makmur Tbk. (INDF) also experienced a decline in stock prices even reaching the bottom of auto rejection (down 7% in one day) in May 2020. The decline in shares was associated with Indofood Group's planned acquisition of Pinehill Company Ltd. where analysts and investors see problems in the implementation of corporate governance, especially related to transparency and transactions between related parties (www.reuters.com and www.investor.id). Meanwhile, PT. Unilever Indonesia Tbk. (UNVR) has also shown a decline in the value of the company from 2017 to 2020, and has taken steps to address the problem. One strategy related to corporate governance is to increase the number of independent directors and commissioners from previously only 3 people to 4 people in 2019 then to 5 people in 2020. It is hoped that with the addition of independent commissioners the company is ready to face future challenges, transforming in each of its business lines including increased supervision of management (www.cnnindonesia.com)

Corporate governance is a concept based on agency theory. Agency theory is based on the contractual relationship between shareholders/owners and management/managers. In agency theory, it is stated that the manager of a company is the agent and the shareholder is the principal. Shareholders who are principals delegate business decision making to managers who are representatives or agents of shareholders. The problem that arises as a result of this corporate ownership system is that agents do not always make decisions that aim to meet the best interests of the principal (conflict of interest) (Jensen and Meckling, 1976). The existence of corporate governance in a company is an effort to reduce principal-agent problems related to the separation of ownership and control. Agency theory argues that firm value will increase and be guaranteed if there is a corporate governance mechanism to minimize agency conflicts.

Jensen and Meckling (1976) and Fama and Jensen (1983) state that companies that emphasize good corporate governance can achieve higher firm value due to higher cash flows due to a reduction in the cost of capital. On the other hand, companies with weak implementation of corporate governance cannot guarantee sustainable shareholder wealth creation. When the corporate governance mechanism is inadequate in a company, outside investors tend to direct funds to companies with better corporate governance structures so that the value of companies with weak corporate governance mechanisms will decrease.

Research on the relationship between corporate governance and firm value has been carried out using various corporate governance mechanisms. Boussaada and Hakimi (2021) used board size, CEO role duality and ownership structure as corporate governance variables. Kamaliah (2020) uses the variables of independent commissioners and audit committees as corporate governance variables. Wang et al. (2020) uses board size, board independence, board gender diversity, board meeting frequency, managerial ownership and institutional ownership as a corporate governance mechanism. Al Farooque et al. (2020) used the variables of board independence, board size, CEO duality, frequency of board meetings, concentration of ownership, family ownership and managerial ownership as a corporate governance mechanism. Alabdullah (2018) uses managerial ownership and foreign ownership as a corporate governance mechanism. Astuti et al. (2019) and Doğan (2020) use institutional ownership as a corporate governance mechanism. In this study, the size of the board, independent commissioners, duality of the role of CEO (CEO duality) and concentration of ownership will be used as a corporate governance mechanism.

Board size is the first significant character and has been shown to influence board effectiveness (Fama and Jensen, 1983). The resource dependence theory states that the function of the board is to obtain resources by using the relationships between members of the board of commissioners and directors with other organizations. A large board size can increase the value of the company because of the diverse knowledge, experience and abilities of the members of the board of commissioners and directors (Al-Matari, 2020). Al-Matari (2020) in his research found that board size had a positive effect on firm value as measured by Tobin's Q. Other studies that found board size had a positive effect on firm value were Waheed and Malik (2019) and Nawaz (2019). Research from Orozco et al. (2018) found a negative effect between board size and firm firm value. Orozco et al. (2018) argues that in accordance with agency theory with fewer board members, better control functions can be formed. Another study which found that board size had a negative effect on firm value was Saidat et al. (2019).

Agency theory argues that independent commissioners will carry out their duties to monitor top management because they have incentives to develop a reputation for controlling decisions, therefore the possibility of collusion and expropriation of shareholder wealth by top management can be reduced by a larger portion of independent commissioners who will then minimize agency costs (Fama and Jensen, 1983). The independence of the board of commissioners is an effective supervisory mechanism in observing management activities, leading to an increase in company value. The independent commissioner also functions as a mediator in the event of a conflict between the majority and minority shareholders so as to increase the value of the company. Research from Al Farooque et al. (2020) found a positive influence between independent board members and firm value as measured by Tobin's Q. Another study that found a positive influence between independent commissioners and firm value was Al-Matari (2020). Saidat et al. (2019) found a negative effect between independent commissioners and firm value with the argument that independent commissioners do not understand the company's business operations, are not full-time employees in the company, and have limited understanding of the complexities and difficulties faced by the company. The results of Kyere and Ausloos (2021) research found different results where independent commissioners had an insignificant effect on firm value as proxied by Tobin's Q.

The duality of the role of directors (CEO duality) occurs when a person serves as a director (executive board) and at the same time serves as a commissioner (supervisory board) (Wijethilake and Ekanayake, 2020). The implementation of a two-tier board in Indonesia makes this condition impossible. However, the placement of directors and commissioners who still have family relationships is still considered as CEO duality (Lam and Lee, 2008). Based on research from PricewaterhouseCoupers (PwC) in 2014, it was found that more than 95% of businesses in Indonesia are family owned while in Southeast Asia, 60% of publicly listed companies are family companies (PricewaterhouseCoopers, 2014). Agency theory claims that CEO duality encourages domineering behavior, hinders transparency and accountability, thus leading to poor firm value and growth. Stewardship theory explains that the phenomenon of the duality of the CEO's role helps in building an integrated command and control system in the organization and leads to better corporate value (Puni and Anlesinya, 2020). Research from Lam and Lee (2008), for family firms, the potential costs of CEO duality, such as agency costs, managerial reinforcement, and minority shareholder takeovers, outweigh the potential benefits. Therefore, CEO non-duality is the preferred board leadership structure for family-controlled firms. Research from Kao et al. (2019) found that CEO duality in the company has a negative effect on firm value as measured by Tobin's Q which indicates a failure in the company's internal control. Research from Al Farooque et al. (2020) found that the duality of the CEO's role had a negative and significant effect on firm value. Nawaz (2019) found that CEO duality has a positive effect on firm value. Puni and Anlesinya (2020) found that CEO duality has an insignificant but not significant effect on firm value.

Concentration of ownership may cause some of the majority shareholders to engage in behaviors that affect firm value. According to the perspective of agency theory, ownership concentration provides incentives to large shareholders to monitor management performance so as to reduce agency costs and lead to an increase in firm value (Puni and Anlesinya, 2020). Empirical research conducted by Puni and Anlesinya (2020) and Waheed and Malik (2019) found ownership concentration has a positive effect on firm value as measured by Tobin's Q. Research from Al Farooque et al. (2020) found ownership concentration had a negative effect on firm value.

Empirical research on the relationship between corporate governance and firm value shows inconsistent results. Puni and Anlesinya (2020) argue that the relationship between corporate governance and firm value may not have a direct relationship, so it is necessary to use a moderator or mediator to explain the relationship. The phenomenon and inconsistency of empirical research results as well as suggestions from previous researchers became the background for this research. This study uses intellectual capital as a mediating variable which is expected to explain the relationship between corporate governance and firm value.

Corporate governance and intellectual capital are related to each other because of their significant role in achieving organizational goals, and ensuring survival and growth (Saeed et al., 2015). Corporate governance is based on agency theory while intellectual capital is based on resource based theory. Agency theory states that agency conflicts can reduce the value of shares owned by outside shareholders or minority shareholders and one way to mitigate this loss of value is to implement corporate governance (Brigham and Daves, 2018: 421).). Companies also need to create competitive advantage and sustainable value growth. To achieve this goal, companies need unique and irreplaceable intangible assets such as intellectual capital. Resource Based Theory (RBT) can be considered as the first theory to focus on the importance of intangible assets (Barney, 1991). The basic argument of this theory is that the competitive advantage of a modern enterprise should lie in the use of its tangible and intangible assets. Intangible assets included in this theory must be unique and irreplaceable which will be able to build a sustainable competitive advantage for the company.

The company's commissioners and directors are responsible for formulating strategies to use human and structural resources efficiently to increase company value (Nawaz, 2017). Resource dependence theory states that good practice in corporate governance, namely the number of large and well-diversified boards, and a higher proportion of independent boards will maintain the company's ability to attract valuable resources, namely resource capital. physical, human, structural and relational (Shahwan and Fathalla, 2020). So that the combination of intellectual capital and corporate governance is the main key for companies to generate good profits and sustainable growth that leads to increasing company value (Nawaz, 2019).

Intellectual capital is becoming increasingly important due to the rapid development of global business which is marked by the development of information and communication technology, knowledge and very tight global competition. The growing information economy and virtual economy have caused the value of intangible assets to have gradually passed the value of tangible assets, which has made discussions related to intellectual capital increasingly important (Passaro et al., 2018). Chowdhury et al. (2019) states that intellectual capital is not only a driver and an important resource in value creation and sustainable development of the company but also a source and key to innovation.

Many previous studies have examined the relationship between corporate governance and company performance and intellectual capital separately (Aslam and Haron, 2021). Aslam and Haron (2021) found that the corporate governance mechanism represented by the variable board size, board independence and CEO duality had a positive and significant effect on intellectual capital. Meanwhile, Shahwan and Fathalla (2020) in their research found that ownership and control structures have a positive effect on intellectual capital. Tran et al. (2020) found that the variables of board size, board independence, CEO duality, and ownership concentration have a negative effect on intellectual capital. The relationship between intellectual capital and firm value has also been studied previously such as research from Sardo and Serrasqueiro (2018), Nawaz (2017), Ni et al. (2020), and Smriti and Das (2018) who found the results of a positive and significant effect. According to Nawaz (2017), Nawaz (2019), Saeed et al. (2015), and Aslam and Haron (2021) studies on the role of intellectual capital in the relationship between corporate governance and firm value are still limited. Recent studies examining the mediating role of intellectual capital in the relationship between corporate governance and firm value for overseas companies were conducted by Aslam and Haron (2021) and Shahwan and Fathalla (2020). Research that examines the mediating role of intellectual capital in the relationship between corporate governance and firm value for companies in Indonesia is still little done.

Based on the theory and empirical research results above, it is indicated that intellectual capital can act as a mediating variable and can clarify the relationship between corporate governance and firm value. This study seeks to complement the literature and previous research by examining the mediating role of Intellectual capital on the relationship between corporate governance and firm value in primary consumer goods industrial sector companies on the Indonesia Stock Exchange.

METHODS OF RESEARCH

The design of this study is a causality study because this study was structured to examine the possibility of a causal relationship between variables. This research was conducted on companies listed on the Indonesia Stock Exchange and classified as companies in the primary consumer goods industry sector or classified in the Consumer Non-Cyclicals Sector Index (IDXNONCYC) for the period 2017-2020. The population in this study are all companies in the primary consumer goods industry sector for the period 2017-2020. The population of this study were 57 companies. Samples were taken from the population based on a non-probability approach using purposive sampling technique. The sample is determined by the criteria of all companies that are always listed on the Indonesia Stock Exchange from January 1, 2017 to December 31, 2020. There are 44 companies that meet the criteria as a sample with 4 years of observation so that the total sample obtained is 176 samples. The exogenous variables in this study are board size (X1), independent commissioners (X2), CEO role duality (X3) and ownership concentration (X4). The endogenous variable in this study is firm value (Y2). The mediating variable in this study is intellectual capital (Y1). The data analysis technique used in this research is path analysis. Path analysis can be carried out using the SPSS (Statistical Package for Social Science) Version 22 program.

RESULTS AND DISCUSSION

Firm Value Variable (Y2) is proxied by Tobin's Q. Tobin's Q is calculated by dividing the market value of the company plus the company's total liabilities with the company's total assets. The average value of companies in the primary consumer goods industry on the Indonesia Stock Exchange for the period 2017 – 2020 is 1.7459 with a standard deviation of 1.72520. The average firm value of 1.7459 shows that on average the sample companies have good performance because the Tobin's Q value is above 1.00. The lowest company value of 0.43 is at PT. Mustika Ratu Tbk. in the 2018 and 2019 periods, while the highest company value is 14.41 at PT. Unilever Indonesia Tbk. in the 2020 period.

The Intellectual Capital variable (Y1) is calculated using the model developed by Pulic (1998) in Pulic (2000) and Pulic (2004), namely the Value Added Intellectual Coefficient (VAICTM). The average coefficient of intellectual capital for companies in the primary consumer goods industry on the Indonesia Stock Exchange for the 2017 – 2020 period is 4.1159 with a standard deviation of 3.06904. The average value of the intellectual capital coefficient is 4.1159, indicating that the sample company creates an average added value of 4.1159 units from the utilization of every 1 unit of capital. The lowest intellectual capital coefficient is -7.98 at PT. Dua Putra Utama Makmur Tbk. in 2020. The highest intellectual capital coefficient is 13.63 at PT. Unilever Indonesia in 2018.

Table 1 – Descriptive Analysis Results

Variable	Number of samples	Minimum value	Maximum value	Average value	Standard deviation
Firm Value (Y_2)	176	0,43	14,41	1,7459	1,72520
Intellectual capital (Y_1)	176	-7,98	13,63	4,1159	3,06904
Board Size (X_1)	176	3,00	18,00	9,9886	3,19283
Independent Commissioner (X_2)	176	0,30	0,80	0,4116	0,09299
CEO duality (X_3)	176	0,00	1,00	0,3750	0,48550
Ownership Concentration (X_4)	176	0,38	1,00	0,7180	0,13992
Dummy variable:	Year	2017	2018	2019	2020
CEO duality (X_3)	There is a duality CEO	38,64%	38,64%	36,36%	36,36%
	There is no duality CEO	61,36%	61,36%	63,64%	63,64%

Source: Data processed, 2022.

The variable Board Size (X1) is the total number of the board of directors plus the board of commissioners. The average value of the board size of primary consumer goods industry companies on the Indonesia Stock Exchange for the period 2017 – 2020 is 9.9773 with a standard deviation of 3.21773. The average value of 9.9773 describes the size of the board in the sample company is quite large. The board size with the lowest score is PT. FKS Food Sejahtera Tbk. of 3.00 in 2019. For the highest board size is PT. Dharma Satya Nusantara Tbk. in 2017, PT. Indofood Sukses Makmur Tbk. in 2017 and PT. Mandom Indonesia Tbk. in 2018 amounted to 18.

The Independent Commissioner variable (X2) is the ratio of the number of members of the independent board of commissioners divided by the total number of members of the board of commissioners. The average value of independent commissioners of primary consumer goods industry companies on the Indonesia Stock Exchange for the 2017 – 2020 period is 0.4116 with a standard deviation of 0.09299. The average value of 0.4116 describes the ratio of independent commissioners in the sample companies in accordance with the Financial Services Authority Regulation which requires the number of Independent Commissioners to be at least 30% (thirty percent) of the total members of the Board of Commissioners. The lowest independent commissioner ratio of 0.30 is PT. Dharma Satya Nusantara Tbk in 2017 and PT. Hero Supermarket Tbk. in 2018. Meanwhile, the highest independent commissioner ratio of 0.80 was PT. Millennium Pharmacon International Tbk. in 2020.

The variable CEO Duality (X3) is calculated as a member of the board of directors who has family or kinship with members of the board of commissioners. The measurement of CEO duality uses a dichotomous approach, if there is CEO duality it is given a number 1, and if there is no CEO duality is given a number 0. In 2017 and 2018, CEO duality was found in 38.64% of the sample companies of the primary consumer goods industry on the Indonesia Stock Exchange, while 61.36% of the sample companies do not have CEO duality. In 2019 and 2020, CEO duality was found in 36.36% of the sample companies while in 63.64% there was no CEO duality.

Ownership Concentration Variable (X4) is calculated by dividing the number of shares owned by shareholders who own more than 5% shares by the number of outstanding shares.

The average value of ownership concentration of primary consumer goods industry companies on the Indonesia Stock Exchange for the period 2017 – 2020 is 0.7180 with a standard deviation of 0.13992. The average value of 0.7180 illustrates that there is a high concentration of majority shareholders in the sample companies. The lowest ownership concentration of 0.38 is at PT. FKS Food Sejahtera Tbk. in 2017 while the highest concentration of ownership was 1.00 at PT. Bentoel Internasional Investama Tbk. in the period 2017 to 2020.

Table 2 – First Model Direct Effect Output Recapitulation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,160	1,669		1,294	,197
	X1	,194	,072	,204	2,710	,007
	X2	1,413	,648	,043	2,181	,026
	X3	-,356	,169	-,056	-2,100	,035
	X4	1,023	,473	,047	2,164	,032

a. Dependent Variable: Y1

Source: Data processed, 2022.

The magnitude of the direct influence on the first model that obtains the results of the structural equation is as follows:

$$Y_1 = 2{,}160 + 0{,}194X_1 + 1{,}413X_2 – 0{,}356X_3 + 1{,}023X_4$$

Where:

Y_1 = *Intellectual Capital*;
X_1 = Board Size;
X_2 = Independent Commissioner;
X_3 = *CEO Duality*;
X_4 = Ownership Concentration.

Table 3 – Second Model Direct Effect Output Recapitulation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,426	,924		-,461	,646
	X1	,040	,018	,075	2,228	,030
	X2	1,174	,476	,063	2,467	,014
	X3	-,289	,127	-,081	-2,275	,033
	X4	1,242	,595	,101	2,086	,042
	Y1	,123	,042	,218	2,909	,004

a. Dependent Variable: Y2

Source: Data processed, 2022.

The magnitude of the direct influence on the second model that obtains the results of the structural equation, which is as follows:

$$Y_2 = -0{,}426 + 0{,}040X_1 + 1{,}174X_2 – 0{,}289X_3 + 1{,}242X_4 + 0{,}123Y_1$$

Where:

Y_1 = *Intellectual Capital*;
X_1 = Board Size;
X_2 = Independent Commissioner;
X_3 = *CEO Duality*;
X_4 = Ownership Concentration.

Table 4 –Normality test results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		176
Normal Parameters [a,b]	Mean	,0000000
	Std. Deviation	,64049845
Most Extreme Differences	Absolute	,172
	Positive	,172
	Negative	-,158
Kolmogorov-Smirnov Z		,277
Asymp. Sig. (2-tailed)		,290

a. Test distribution is Normal.

b. Calculated from data.

Source: Data processed, 2022.

The level of significance of the data Sig. (2-tailed) is 0.290 greater than 0.05 so it shows the data is normally distributed, then the regression model is declared to meet the assumption of normality test.

Table 5 –Multicollinearity test results

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	,941	1,062
	X2	,981	1,019
	X3	,904	1,106
	X4	,892	1,121
	Y1	,947	1,056

a. Dependent Variable: Y2

Source: Data processed, 2022.

Tolerance and Variance Inflation Factor (VIF) values have a tolerance value greater than 0.10 and a VIF value less than 10, which means that this regression model does not contain multicollinearity problems so that the regression model is feasible for further analysis.

Table 6 – Heteroscedasticity test results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,824	,674		-1,223	,223
	X1	,056	,029	,139	1,901	,059
	X2	,469	,996	,034	,471	,638
	X3	-,338	,199	-,127	-1,701	,091
	X4	1,149	,694	,125	1,655	,100
	Y1	,094	,307	,222	,304	,702

a. Dependent Variable: Abres

Source: Data processed, 2022.

The overall significance value in the heteroscedasticity test is greater than 0.05 where the board size variable (X1) has a sig value of 0.059, independent commissioners (X2) have a sig value of 0.638, CEO duality (X3) has a sig value of 0.091, ownership concentration (X4) has a sig value of 0.091. Sig value is 0.100 and intellectual capital (Y1) has a sig value of 0.702, so it can be concluded that the regression model is free from heteroscedasticity symptoms.

Table 7 – Autocorrelation test results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,709[a]	,503	,501	1,66445	1,972

a. Predictors: (Constant), Y1, X2, X3, X1, X4

b. Dependent Variable: Y2

Source: Data processed, 2022.

The DW value is 1,972. The dU value for the number of samples 176 with 5 independent variables is 1.8121. Then the value of 4 - dU is 2.1879, so the results of the autocorrelation test are dU < DW < 4 - dU which is 1.8000 < 1.972 < 2.1879, then the regression model created does not contain autocorrelation symptoms.

The significance value of Board Size (X1) is 0.007 smaller than 0.05 with a t-value of 2.710. This value means that the variable Board Size (X1) has a positive and significant effect on Intellectual Capital (Y1). The significance value of the Independent Commissioner (X2) is 0.026, which is smaller than 0.05 with a t-value of 2.181. This value means that the Independent Commissioner variable (X2) has a positive and significant effect on Intellectual Capital (Y1). The significance value of CEO Duality (X3) is 0.035 which is smaller than 0.05 with a t value of -2.100. This value means that the CEO Duality (X3) variable has a negative and significant effect on Intellectual Capital (Y1). The significance value of Ownership Concentration (X4) is 0.032 which is smaller than 0.05 with a t-value of 2.164. This value means that the variable of Ownership Concentration (X4) has a positive and significant effect on Intellectual Capital (Y1).

The significance value of Board Size (X1) is 0.030 smaller than 0.05 with a t-value of 2.228. This value means that the variable Board Size (X1) has a positive and significant effect on Firm Value (Y2). The significance value of the Independent Commissioner (X2) is 0.014, which is smaller than 0.05 with a t-value of 2.467. This value means that the Independent Commissioner variable (X2) has a positive and significant effect on Company Value (Y2). The significance value of CEO Duality (X3) is 0.033 which is smaller than 0.05 with a t value of -2.275. This value means that the CEO Duality variable (X3) has a negative and significant effect on Firm Value (Y2). The significance value of Ownership Concentration (X4) is 0.042 which is smaller than 0.05 with a t-value of 2.086. This value means that the Ownership Concentration variable (X4) has a positive and significant effect on Firm Value (Y2). The significance value of Intellectual Capital (Y1) is 0.004 smaller than 0.05 with a t-value of 2.909. This value means that the Intellectual Capital variable (Y1) has a positive and significant effect on Firm Value (Y2).

Table 8 – Result F Count

Model	F test	Significance of F test
First	32,398	0,000
Second	43,602	0,000

Source: Data processed, 2022.

The first model shows the calculated F value of 32,398 with a significance value of 0.000 which is smaller than the significance level (α) = 0.05. The significance results show that the size of the board, independent commissioners, CEO Duality, and concentration of ownership simultaneously have a significant effect on intellectual capital. In the second model, the calculated F value is 43,602 with a significance value of 0.000 which is smaller than the significance level (α) = 0.05. This shows that the size of the board, independent commissioners, CEO Duality, concentration of ownership and intellectual capital simultaneously have a significant effect on firm value.

The R_m^2 value of 0.7683 or 76.83% means that the variation of the Firm Value can be explained by the model formed, namely Board Size, Independent Commissioner, CEO duality, Ownership Concentration and Intellectual Capital of 76.83%, while the remaining 23 .17% is explained by other factors outside the model formed.

The firm value variable is influenced by intellectual capital variable with a path coefficient of 0.218 when compared to the board size variable with a path coefficient of only 0.075. The firm value variable is influenced by intellectual capital with a path coefficient of 0.218 when compared to the independent commissioner variable with a path coefficient of only 0.063. The firm value variable is influenced by the intellectual capital variable with a path coefficient of 0.218 when compared to the CEO duality variable with a path coefficient of only 0.081. Firm Value variable is more influenced by intellectual capital variable with path coefficient 0.218 when compared to ownership concentration variable with path coefficient only 0.101.

Table 9 – Recapitulation of Results Direct Influence, Indirect Influence and Total Influence of board size (X1), independent commissioner (X2), duality of CEO role (X3), ownership concentration (X4), intellectual capital (Y1) and firm value (Y2)

Variable effects	Direct effect	Indirect effect	Total effect
$X_1 \rightarrow Y_2$	0,075	0,044472	0,119472
$X_2 \rightarrow Y_2$	0,063	0,009374	0,072374
$X_3 \rightarrow Y_2$	-0,081	-0,012208	-0,093208
$X_4 \rightarrow Y_2$	0,101	0,010246	0,111246
$X_1 \rightarrow Y_1$	0,204	-	0,204
$X_2 \rightarrow Y_1$	0,043	-	0,043
$X_3 \rightarrow Y_1$	-0,056	-	-0,056
$X_4 \rightarrow Y_1$	0,047	-	0,047
$Y_1 \rightarrow Y_2$	0,218	-	0,218

Source: Data processed, 2022.

Based on the results of the Sobel test above, the Z value is 2.7181 > 1.96. So it can be concluded that Intellectual Capital is able to significantly mediate the relationship between Board Size and Firm Value. Based on the results of the Sobel test above, the Z value is 2.2394 > 1.96. So it can be concluded that Intellectual Capital is able to significantly mediate the relationship between Independent Commissioners and Firm Value. Based on the results of the Sobel test above, the Z value is 2.8666 > 1.96. It can be concluded that Intellectual Capital is able to significantly mediate the relationship between CEO Duality and Firm Value. Based on the results of the Sobel test above, the Z value is 2.7586 > 1.96. So it can be concluded that Intellectual Capital is able to significantly mediate the relationship between Ownership Concentration and Firm Value.

Table 10 – Recapitulation of Z value calculation

Model	Effect	se	Z	p
X = X1 M = Y1 Y = Y2	0,1359	0,0507	2,7181	0,0019
X = X2 M = Y1 Y = Y2	0,1861	0,0831	2,2394	0,114
X = X3 M = Y1 Y = Y2	0,0443	0,0155	2,8666	0,0012
X = X4 M = Y1 Y = Y2	0,3544	0,1284	2,7586	0,0014647

Source: Data processed, 2022.

The significance value of the effect of board size (X1) on firm value (Y2) without a mediating variable is 0.014 <0.05 so it can be interpreted that board size (X1) has a significant effect on firm value (Y2), while when it is included intellectual capital variable (Y1) into the regression equation, the significance value becomes 0.030 <0.05 so it can be interpreted that it still has a significant influence. From the tests conducted, it is concluded that the intellectual capital variable acts as a partial mediation variable in the influence of board size on firm value.

Table 11 – Comparison of Significance Values between Regression Models without Mediation Variables and With Mediation Variables

Exogenous Variable	Significance value		Significant/Insignificant	
	No mediating variable	With mediating variable	No mediating variable	With mediating variable
X1	0,014	0,030	Significant	Significant
X2	0,046	0,014	Significant	Significant
X3	0,02	0,042	Significant	Significant
X4	0.011	0,04	Significant	Significant

Source: Data processed, 2022.

The significance value of the influence of the independent commissioner (X2) on firm value (Y2) without a mediating variable is 0.046 <0.05 so it can be interpreted that the independent commissioner (X2) has a significant influence on firm value (Y2), while when it is included the intellectual capital variable (Y1) into the regression equation, the significance value becomes 0.014 <0.05 so it can be interpreted that it still has a significant influence. From the tests conducted, it is concluded that the intellectual capital variable acts as a partial mediation variable in the influence between independent commissioners on firm value.

The significance value of the effect of CEO duality (X3) on firm value (Y2) without a mediating variable is 0.02 < 0.05 so it can be interpreted that CEO duality (X3) has a significant influence on firm value (Y2) while when it is included the intellectual capital variable (Y1) into the regression equation, the significance value becomes 0.042 <0.05 so it can be interpreted that it still has a significant influence. From the tests conducted, it is concluded that the intellectual capital variable acts as a partial mediation variable in the influence between CEO duality on firm value.

The significance value of the influence of ownership concentration (X4) on firm value (Y2) without a mediating variable is 0.011 <0.05 so it can be interpreted that ownership concentration (X4) has a significant effect on firm value (Y2) while when it is included intellectual capital variable (Y1) into the regression equation, the significance value becomes 0.004 <0.05 so it can be interpreted that it still has a significant effect. From the tests conducted, it is concluded that the intellectual capital variable acts as a partial mediation variable in the influence of ownership concentration on firm value.

The findings of this study are also consistent with the argument provided by the resource dependence theory that a large board is needed to monitor management activities and mitigate fraud, which will ultimately increase firm value. The results of this study are also in accordance with the results of previous studies conducted by Al-Matari (2020), Puni and Anlesinya (2020) and Al Farooque et al. (2020). The results of this study are in accordance with agency theory where the strategy to overcome agency problems includes a supervisory function that can be used by the owner to ensure that company executives make decisions for the benefit of the owner which ultimately maximizes the value of the company. The results of this study are also in accordance with the results of previous studies conducted by Al-Matari (2020), Puni and Anlesinya (2020) and Al Farooque et al. (2020). The results of this study are consistent with agency theory which states that the duality of the CEO's role increases the CEO's authority, which exacerbates agency conflicts and consequently decreases company performance. The results of this study are also in accordance with the results of previous studies conducted by Kao et al. (2019) and Al Farooque et al. (2020) and Singh et al. (2018)

The results of this study are consistent with agency theory which states that ownership concentration provides incentives for dominant shareholders in supervising management, thereby reducing agency costs and leading to an increase in firm value. The results of this study are also in accordance with the results of previous studies conducted by Puni and Anlesinya (2020), Kao et al. (2019), and Waheed and Malik (2019)

The results of this study found that the board size variable has a positive and significant effect on the intellectual capital variable and the intellectual capital variable has a positive and significant effect on firm value. The results of this study are in accordance with the results of previous studies conducted by Aslam and Haron (2021), Aslam and Haron (2020) and Buallay and Hamdan (2019). While the results of research that found intellectual capital had a positive and significant effect on firm value were in accordance with the results of previous studies conducted by Sardo and Serrasqueiro (2018), Nawaz (2017), Ni et al. (2020), and Smriti and Das (2018).

CONCLUSION

Based on the results of the research conducted in the previous chapter, it can be concluded as follows: Board size has a positive and significant effect on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the period 2017 – 2020. The results of this study support the resource dependence theory which states that a large board size will provide diverse knowledge, expertise and skills that are very useful for companies to manage company resources, monitor management activities and mitigate fraud which will ultimately increase the value of the company. Independent commissioners have a positive and significant effect on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the period 2017 – 2020. The results of this study support the agency theory which states that strategies to overcome agency problems. CEO duality has a negative and significant effect on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the 2017-2020 period. Intellectual capital is able to act as a mediating variable in the effect of board size on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the period 2017 – 2020. The results of this study are in accordance with the resource dependency theory. Intellectual capital is able to act as a mediating variable in the influence of independent commissioners on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the period 2017 – 2020. Intellectual capital is able to act as a mediating variable in the influence of CEO duality on firm value in companies in the consumer goods industry. on the Indonesia Stock Exchange for the period 2017 – 2020. Intellectual capital is able to act as a mediating variable in the effect of concentration of ownership on firm value in companies in the primary consumer goods industry on the Indonesia Stock Exchange for the period 2017 – 2020.

Suggestions that can be given from the results of research and discussion that have been carried out are as follows: The results of this study are expected to be input for companies to pay attention to corporate governance mechanisms to reduce agency problems including effective supervision of activities carried out by management and give more attention to efficiency use of intellectual capital in the company. Based on the results of this study, it is expected that before investing in public companies, investors first analyze the implementation of corporate governance and intellectual capital factors in the company.

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