

How Diversification Moderates the Impact of Intellectual Capital, Capital Structure, and Operating Costs on Financial Performance in the IDX Food and Beverage Sector (2017-2022)

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Abstract

This study explores how the Diversification Strategy mediates financial outcomes associated with Intellectual Capital, Capital Structure, and Operational Costs. The population comprised food and beverage firms listed on the Indonesia Stock Exchange from 2017 to 2022. Samples were selected via purposive sampling from fifteen different companies. Data were sourced secondarily from the IDX Website. Moderate Regression Analysis (M.R.A.) was conducted using SmartPLS software version 3.0, with a significance level set at α (alpha) 0.05 in this research. It was demonstrated that Intellectual Capital and Capital Structure impact financial performance. Conversely, neither Operational Costs nor Diversification Strategy influence the company's bottom line. According to the study's findings, aspects of financial performance related to intellectual capital, capital structure, and operational expenses are unaffected by the diversification approach.

Keywords: Intellectual Capital, Capital Structure, Operational Costs and Diversification Strategy

INTRODUCTION

Despite the rapidly evolving dynamics, the non-oil and gas processing sector has shown positive progress with impressive growth and significant contributions to national economic development. The sector's impact on G.D.P. is as follows, as reported on the Website of the Indonesian Ministry of Industry (<https://kemenperin.go.id>): has steadily increased (Kemenperin, 2024). Since 2010, this sector has been the most significant contributor to national G.D.P., even during the pandemic peak in 2020-2021. In 2021, the sector's G.D.P. reached IDR 2,946.9 trillion, up from IDR 2,760.43 trillion in 2020. Company performance is crucial, and numerous factors can influence financial outcomes. To achieve strong performance, management must make effective decisions to address issues such as intense competition and rapid global changes.

A typical strategic approach is diversification, where companies integrate multiple businesses to leverage positive impacts and gain valuable experience and knowledge to boost profits (Zuhaikal, 2018). Financial performance can be affected by income, operational costs, capital structure, asset and liability management, intellectual capital, economic shifts, and market competition, all of which can be managed through diversification. Analysts advise investors to be cautious with investment strategies, emphasizing the importance of understanding market momentum and diversification. The effectiveness of diversification strategies can vary based on industry, goals, managerial skills, and market conditions.

METHODS

The evaluation of measurement models, or outer models, begins with testing construct validity, which involves assessing convergent validity through the loading factor values. This is followed by reliability testing, indicated by composite reliability and reliability coefficients. Modified regression analysis (M.R.A.) is used to identify the type, significance, and strength of the link between variables in the constructed model, which is the inner model of the assessment. At last, we check the model's performance by seeing how well it accounts for the dependent variable's variation using Adjusted R Square.

RESULTS

Structural Modeling Test (Outer Model)

The prepared conceptual framework underpins the following structural model in this investigation:

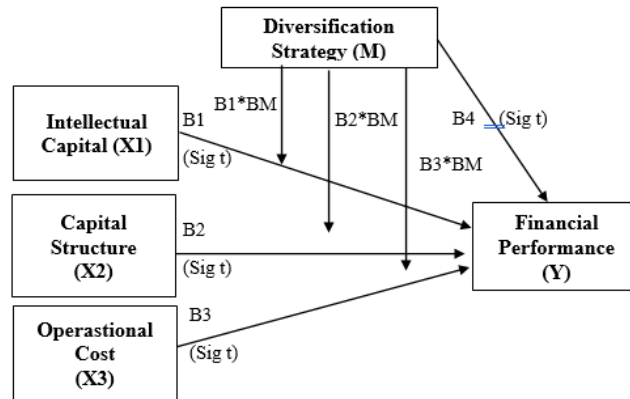


Figure 1: The Proposed Structural Model

In formulating the Structural Model, constructing relationships among latent variables represents the initial phase. The exogenous latent variables identified in this study include X1 (Intellectual Capital), X2 (Capital Structure), X3, and M. The investigation positions Financial Performance (Y) as the endogenous variable. Constructed with secondary data sourced from the Indonesia Stock Exchange Website (www.idx.co.id), this model's validity and reliability were assessed and are displayed in the subsequent outer model stage (Idx, 2024):

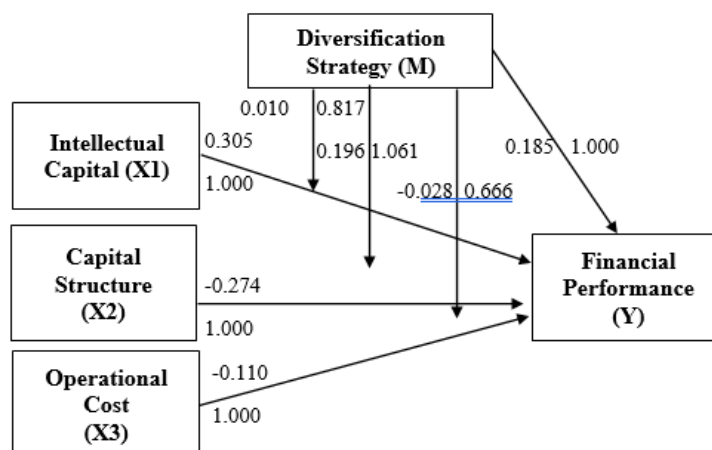


Figure 2: The Result of Proposed Structural Model

Source: SmartPLS 3.0 output, prepared by researchers in 2023

1. Convergent Validity

Table 1 below displays the Outer Loading values for the variables examined in this study:

Table 1. Outer Loading Value

Variable	Indikator	Outer Loading	Keterangan
Intellectual Capital (X1)	VAHU	1.000	Valid
Capital Structure (X2)	DAR	1.000	Valid
Operational Cost (X3)	BOPO	1.000	Valid
Financial Performance (Y)	ROA	1.000	Valid
Diversification Strategy (M)	HI	1.000	Valid
Moderation Effect	X1*M→Y	0.793	Valid
	X2*M→Y	1.249	Valid
	X3*M→Y	0.666	Valid

Source: SmartPLS 3.0 output, prepared by researchers in 2023

The criteria for convergent validity are met by this study, as demonstrated by the fact that each variable is explicable by its indicators, all of which have outer loading values exceeding 0.5 in the table above.

2. Discriminant Validity

Table 2 below presents the Discriminant Validity (Fornell-Larker Criterion) values for the variables analyzed in this study:

Table 2. The Discriminant Validity (Fornell-Larker Criterion) Value

	<u>Operational Cost (X3)</u>	<u>Financial Performance (Y)</u>	<u>Intellectual Capital (X1)</u>	<u>Diversification Strategy (M)</u>	<u>Capital Structure (X2)</u>	X1*M*Y	X2*M*Y	X3*M*Y
<u>Operational Cost (X3)</u>	1.000							
<u>Financial Performance (Y)</u>	-0.206	1.000						
<u>Intellectual Capital (X1)</u>	-0.427	0.324	1.000					
<u>Diversification Strategy (M)</u>	0.003	0.148	0.106	1.000				
<u>Capital Structure (X2)</u>	-0.066	-0.188	0.045	0.082	1.000			
X1*M*Y	-0.130	0.095	0.202	-0.037	-0.212	1.000		
X2*M*Y	0.081	0.045	-0.163	-0.214	0.234	-0.148	1.000	
X3*M*Y	0.001	-0.078	-0.160	-0.102	0.130	-0.518	0.053	1.000

Each indicator's latent construct has the highest Fornell-Larker Criterion value compared to other construct values, as seen in Table 2 above. This elucidates the high discriminant validity of the indicators used to construct the variables in this research. Table 3 below exhibits the Average Variance Extracted (AVE) values for the variables in this study, alongside the cross-loading values, which illustrate the outcomes of the discriminant validity test. Latent constructs are considered to represent good measurement models if they possess an AVE value of 0.5 or higher:

Table 3. Average Variance Extracted (AVE) Value

Variable	Average Variance Extracted (AVE)	Description
Operational Cost (X3)	1.000	Valid
Financial Performance (Y)	1.000	Valid
Intellectual Capital (X1)	1.000	Valid
Diversification Strategy (M)	1.000	Valid
Capital Structure (X2)	1.000	Valid
X1*M → Y	1.000	Valid
X2*M → Y	1.000	Valid
X3*M → Y	1.000	Valid

Source: SmartPLS 3.0 output, prepared by researchers in 2023

3. Composite Reliability

Table 4 below presents the composite reliability and Cronbach's Alpha values for the variables examined in this study:

Table 4. Composite Reliability and Cronbach's Alpha Value

Variable	Cronbach's Alpha	Composite Reliability	Description
Operational Cost (X3)	1.000	1.000	Reliable
Financial Performance (Y)	1.000	1.000	Reliable
Intellectual Capital (X1)	1.000	1.000	Reliable
Diversification Strategy (M)	1.000	1.000	Reliable
Capital Structure (X2)	1.000	1.000	Reliable
X1*M → Y	1.000	1.000	Reliable
X2*M → Y	1.000	1.000	Reliable
X3*M → Y	1.000	1.000	Reliable

The table referenced indicates that all constructs meet the required trustworthiness thresholds, as evidenced by values of Cronbach's Alpha and composite reliability that are equal to or exceed 0.7. Satisfactoriness is established when the Cronbach's Alpha value reaches or surpasses 0.7, and the composite reliability score ranges from 0.6 to 0.7.

The Structural Model Testing (Inner Model)

Figure 3 below reveals the results of the Inner Model Test on the structural model. This test employs the significance of structural path parameter coefficients, t-test outcomes, and R-squared values for the dependent variable to evaluate the structural model test (inner model). It is essential to verify the R-square for each dependent latent variable when evaluating a model using P.L.S.

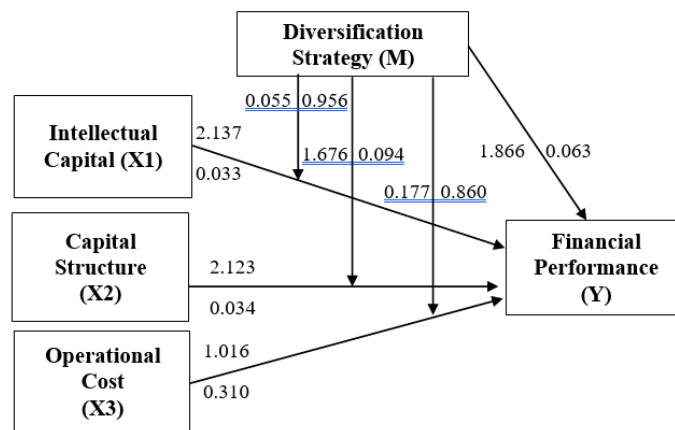


Figure 3: The Result of Structural Model Testing (Inner Model)

Source: SmartPLS 3.0 output, prepared by researchers in 2023

Model Fit Test / Goodness Fit Test

In SEM-PLS analysis, the extent to which latent variables of the structural model influence each other can be assessed by examining the R Square (R²) value. Table 5 presents the R-Square value for this study:

Table 5. R Square Value (R²)

	R Square	R Square Adjusted
Kinerja Keuangan (Y)	0.209	0.142

Source: SmartPLS 3.0 output, prepared by researchers in 2023

According to the information provided in the preceding table, the variance is primarily influenced by other factors, which account for 85.8%. Only 14.2% is attributable to all the

model variables combined, thus demonstrating their weak collective impact. The R Squared and Adjusted R Squared values are 0.209 and 0.142, respectively.

Moderate Regression Analysis (M.R.A) Results

This investigation seeks to determine the extent to which the Diversification Strategy is a moderating variable that either enhances or mitigates the effects of interactions among Intellectual Capital, Capital Structure, and Operational Costs on corporate performance. Table 6 below presents the outcomes derived from the moderate regression analysis:

Table 6. Value of Relationship Between Variables (Direct and Indirect Effect)

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Keputusan
Operational Cost (X3) -> Financial Performance (Y)	-0.110	-0.101	0.108	1.016	0.310	Hypothesis Rejected
Intellectual Capital (X1) -> Financial Performance (Y)	0.305	0.313	0.143	2.137	0.033	Hypothesis Accepted
Diversification Strategy (M) -> Financial Performance (Y)	0.185	0.203	0.099	1.866	0.063	Hypothesis Rejected
Capital Structure (X2) -> Financial Performance (Y)	-0.274	-0.258	0.129	2.123	0.034	Hypothesis Accepted
X1*M*Y -> Financial Performance (Y)	0.010	0.006	0.187	0.055	0.956	Hypothesis Rejected
X2*M*Y -> Financial Performance (Y)	0.196	0.218	0.117	1.676	0.094	Hypothesis Rejected
X3*M*Y -> Financial Performance (Y)	0.028	0.025	0.159	0.177	0.860	Hypothesis Rejected

Source: SmartPLS 3.0 output, prepared by researchers in 2023

From Table 6, a regression formula has been derived as follows:

$$Y : b1X1 + b2X2 + b3X3 + b4M + b5X1M + b6X2M + b7X3M$$

The explanation of this regression formula is detailed subsequently:

a. Intellectual Capital Regression Coefficient (X1)

The positive coefficient denotes intellectual capital's positive influence on Financial Performance. The sample's initial value for the Intellectual Capital variable, 0.305, signifies that a one-point increment in Intellectual Capital enhances financial performance by 0.355 per cent.

b. Regression Coefficient of Capital Structure (X2)

The negative coefficient indicates an inverse relationship between financial performance and Capital Structure. In the original sample, for every one-point increase in Capital

Structure, financial performance diminishes by 0.274 points. The default value assigned to the Capital Structure variable stands at -0.274.

c. Regression Coefficient of Operating Expenses (X3)

When operational costs increase by a unit, financial performance decreases by -0.110 units, as demonstrated by the initial sample value of -0.110. The negative coefficient signifies that Operational Costs adversely influence financial performance.

d. Diversification Strategy Regression Coefficient (M)

The Diversification Strategy variable has been demonstrated to significantly impact Financial Performance, as evidenced by the original sample value (O) of 0.185. This value indicates that for each incremental increase in the Diversification Strategy, Financial Performance is enhanced by 0.185 points. A positive coefficient confirms the beneficial influence of the Diversification Strategy on Financial Performance.

e. Regression Coefficient of Moderation of Intellectual Capital * Diversification Strategy

Examining the moderating effects of Intellectual Capital * Diversification Strategy on financial outcomes, a positive coefficient emerges, suggesting a favourable linkage between Intellectual Capital, Financial Performance, and Diversification Strategy. It has been revealed that for each single-unit increment in the moderation variable of the Intellectual Capital * Diversification Strategy, financial performance is enhanced by 0.010. This finding is reflective of an initial sample value (O) marked at 0.010, affirming the positive impact of such moderation.

f. Moderation Regression Coefficient of Capital Structure * Diversification Strategy

A favourable positive coefficient suggests an association between financial performance and the Capital Structure moderated Diversification Strategy. The moderation of Capital Structure * Diversification Strategy was evaluated, showing a value of 0.196. It has been demonstrated that a unit enhancement in the Diversification Strategy, when moderated by Capital Structure, corresponds to an increment of 0.196 in financial performance.

g. Regression Coefficient of Moderation of Operating Costs * Diversification Strategy

It has been demonstrated that a positive correlation exists between Financial Performance and Operating Costs when moderated by a Diversification Strategy. Enhancing one unit in the moderation of Operating Costs * Diversification Strategy results in an increment of 0.028 in Financial Performance. This is evidenced by the original sample

value (O) of 0.028, indicating a favourable impact. The positive coefficient underscores the constructive modulation of Operating Costs by the Diversification Strategy on Financial Performance.

DISCUSSION

Influence Capital Intellectual Impact on Financial Performance

By previous studies by Lubis & Ovami (2020) and Puspitosari (2016), In addition to discovering a statistically significant correlation between the two, this study's test findings show that I.P. has a significant impact on EPS. Utilizing intangible assets and expertise by a company within the Food and Beverage subsector notably enhances its ability to maximize Intellectual Capital. It has been observed that appropriate management of these assets significantly contributes to elevating business stability or profitability, thereby affording the company a competitive advantage over its rivals.

Contrary to Maesaroh & Rahayu's (2015) findings, this investigation presents divergent outcomes regarding the impact of Intellectual Capital elements like V.A.I.C., Value-Added Human Capital (V.A.H.U.), and Structural Capital Value-Added (S.T.V.A.) on financial performance. The study above did not demonstrate a significant influence of these factors.

Influence Capital Structure on Financial Performance

The investigation findings reveal a markedly adverse correlation between Capital Structure and Financial Performance. It has been demonstrated in a study by Zuhaikal (2018) that the company's proficiency in debt management is lacking, which results in a diminished return on assets. This deficiency might lead to greater interest from investors in the company. Reducing debt usage might enhance financial performance, which management tends to find manageable. Particularly in the food and beverage sector, the procurement of raw materials presents a financial hazard due to fluctuating prices annually and obligatory financial obligations, negatively impacting the company.

Contrary to this study, Rahmatin & Kristanti (2020) indicated that Capital Structure does not positively and significantly impact Financial Performance.

The Impact of Operating Costs on Financial Performance

Research by Sunarka et al. (2019) supports this study's findings, indicating an alignment in outcomes. Operational costs have not significantly influenced financial success, which suggests a deficiency in managing these costs. The inefficiency in managing Operational Costs is revealed by their lack of significant impact on Financial Performance.

Damayanti & Sulindawati (2023) and Marismiati (2017) provided evidence contrary to this study, demonstrating through their research that Operational Costs exert a positive and significant influence on Financial Performance.

The Influence of Diversification Strategy on Financial Performance

As demonstrated by this investigation, the lack of influence of the Diversification Strategy on Financial Performance aligns with earlier findings by Sulastris (2015) and Sri & Chen (2019). These studies collectively confirm that a firm's financial success is not determined by its Diversification Strategy, as indicated by the variable representing this strategy in the analysis.

This shows the ineffectiveness of management's implementation in choosing the right industry and strategy execution. Diversification can be an additional risk for the company, such as operational complexity and overhead costs. Diversification Strategy has the potential to affect financial performance, and its success depends on various factors and how the company implements it.

Contrary to this investigation, Itung & Lasdi (2018), along with Nurhayati & Rinofah (2021), have indicated that the Diversification Strategy does exert an influence on company performance, as demonstrated by their research findings.

The Effect of Intellectual Capital Moderated by Diversification Strategy on Financial Performance

Several factors, including inadequate implementation, limited synergy, ineffective management, shifts in external conditions, insufficient resource provision, and market instability, may account for the Diversification Strategy's observed lack of significant moderation in the link between Intellectual Capital and Financial Performance. The investigation findings indicated that the Diversification Strategy's effect on moderating the association between Intellectual Capital and Financial Performance is not significant.

The Effect of Capital Structure Moderated by Diversification Strategy on Financial Performance

The research observed that the Diversification Strategy fails to act as a moderator in the linkage between Capital Structure and Financial Performance, showing no significant influence. This outcome may be attributed to varying risk, management complexity, inadequate integration levels, volatile market conditions, and evolving business landscapes, which hinder corporations' ability to manage both dimensions effectively concurrently. The prominence of alternate elements like risk management, product innovation, and marketing strategies might exert a more substantial impact on financial outcomes, thereby diminishing the perceptibility of the moderating effect of the Diversification Strategy on Capital Structure.

The Effect of Operating Costs Moderated by Diversification Strategy on Financial Performance

The study revealed that the relationship between operational costs and financial performance remains unmoderated by the diversification strategy and needs to be more significant. Various factors contribute passively to this phenomenon: the independence of Operational Costs, the absence of adequate synergy and operational scale, the division of resources, a strategic deviation from focus, fluctuating market conditions, and the challenges management faces in effectively optimizing and minimizing Operational Costs.

CONCLUSION

1. The hypothesis's outcomes have demonstrated that Intellectual Capital has a notably significant impact on financial performance. Management could enhance the company's stability and profitability by optimizing the potential value of intangible assets and knowledge, offering a better value relative to its competitors.
2. From the results derived from the hypothesis, it is inferred that Capital Structure substantially influences financial performance. Future enhancements in performance and profitability might be realized if management strategically balances Capital Structure costs, financial risks, liquidity requirements, and the broader needs of the company.
3. As demonstrated by hypothesis testing results, operational costs do not significantly impact financial performance. To enhance both performance and financial prosperity, it is recommended that management focus on augmenting the efficiency of managing Operational Costs.
4. The results derived from testing the hypothesis indicate that the Diversification Strategy exerts no substantial impact on financial performance. It is suggested that management enhances the efficacy of its application through the careful selection of appropriate industries and the execution of strategies, thereby preventing the Diversification Strategy from escalating into an added risk for the company. Because the success of a diversification strategy can affect financial performance and depends on its implementation, it will affect financial performance if the diversification strategy is correct.

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