

## THE MODERATION EFFECT OF COMPETITIVE STRATEGY ON THE RELATIONSHIP BETWEEN DEBT LEVELS AND FIRM PERFORMANCE

**Dhia Shofiah Mardiana**

Faculty of Economics and Business, Universitas Airlangga, Indonesia

E-mail: [dhia.ofiah.mardiana-2019@feb.unair.ac.id](mailto:dhia.ofiah.mardiana-2019@feb.unair.ac.id)

### *Abstract*

*Among the most important factors in achieving sustainable performance is the determination of capital structure. An optimal capital structure strikes a balance between risk and return received so as to improve firm performance. The purpose of this study was to examine and analyze the effect of debt level on firm performance with competitive strategy as the moderator. This study focused on businesses that were listed on the Indonesia Stock Exchange between 2015 and 2019. 62 companies were chosen as samples using the purposive sampling method, yielding 277 observations. Multiple regression analysis and moderated regression analysis were used to analyze the data. This study found that debt level has a negative effect on firm performance, and that competitive strategy moderates the influence of debt level on firm performance.*

**Keywords :** *debt level, competitive strategy, firm performance*

**JEL Classification :** *G32, L25, M41*

### **1. INTRODUCTION**

Firm performance refers to how well a company manages its resources. Companies must understand the characteristics of each resource in order to create a competitive advantage allowing them to achieve sustainable performance. One of the most important factors in achieving sustainable performance is the determination of the company's capital structure. Companies with an optimal capital structure will correspondingly produce an optimal rate of return. A capital structure is considered optimal if it strikes the right balance between risk and return received so as to improve company performance. Capital structure refers to a company's mix of sources of funds viz., its debt and equity.

The choice to borrow money from a third party can lower the adverse selection costs brought on by information asymmetry. When there is knowledge asymmetry, using debt financing is still less expensive than using equity funding sources (Myers, 1984). The use of debt

can improve company performance depending on the severity of the existing information asymmetry (Fosu et al., 2016). When making funding decisions, a company must consider the expected costs and benefits. One study that shows the relationship between debt levels and firm performance is Modigliani and Miller (1963), which states that the existence of a tax subsidy on debt interest payments will cause the company's performance to improve along with the amount of debt.

This study is premised on the agency theory, which states that a company's capital structure can influence the behavior of its agents. A company that bears a lot of debt will rethink its entire strategy and structure now (Jensen, 1989). This overleveraged state forces managers (agents) to cut unhealthy investments, reduce overhead costs and improve company strategy. Companies with high debt levels will find themselves in a crisis situation and be forced to rethink strategies that might see them gain a competitive advantage, especially in cut-throat industries.

In this study, competitive strategy is used as a moderating variable using two main strategies—cost leadership and differentiation strategies—that businesses might employ to gain a competitive edge. Companies that adopt a cost leadership strategy may increase market share by presenting themselves as a low-cost option for consumers. On the other hand, companies that adopt a differentiation strategy will achieve a competitive advantage by means of investing in product or service development and offering the unique qualities that customers appreciate and in turn allow the companies to charge a premium price.

A number of studies, namely those of Jermias and Al-Rdaydeh, concluded that the strategy of moderating the debt level relationship had an effect on company performance. The findings of Jermias' study indicate that the degree of competition and business strategy influence how closely financial leverage and performance are related. Companies that implement a cost leadership strategy will benefit more from the use of debt thanks to a managerial efficiency conforming to lender monitoring requirements (Jermias, 2008). Companies that implement a differentiation strategy will have a higher cost of debt compared to those implementing a cost leadership strategy because the lenders may place constraints limiting the ability of managers to be creative and innovative, whereas that ability is very important for said companies to develop and succeed. The study by Al-Rdaydeh demonstrates that the relationship between financial leverage and performance is moderated by competitive strategy. For businesses that use product differentiation initiatives, the detrimental impact of financial leverage on corporate performance is more pronounced.

Jensen (1989) reveals that debt is a powerful agent of change. Debt will improve a company's performance thanks to the control function of the debt itself, provide tax savings, reduce monitoring costs arising from agency problems, and motivate managers to make efficient allocation of company resources. It is paramount for companies to determine their level of debt in order to achieve sustainable performance. A company that has an optimal level of debt proportionate to the company's targets and characteristics will accordingly produce an optimal rate of return. Dinh and Pham (2020) stated that a company can

improve its performance with the optimal proportion of debt level in line with the company's operational capacity.

**H1:** Debt level positively influences firm performance.

According to Jensen & Meckling (1976), the choice of a company's financial structure might influence agent behavior. The ratio of debt to equity used to finance a company's operations is referred to as its capital structure. A high debt level will force managers (agents) to make efficiency efforts and improve company strategies. Companies that adopt a cost leadership strategy may increase market share by presenting themselves as a low-cost option for consumers. On the other hand, companies that adopt a differentiation strategy will achieve a competitive advantage by means of investing in product or service development and offering the unique qualities that customers appreciate and in turn allow the companies to charge a premium price. Debt can help discipline managers' behavior and force them to cut back on unprofitable company expenses. When efficiency is achieved, the company will most likely see improvement in performance. The aim of the differentiation strategy is to differentiate one's self from competitors and encourage companies to create products or services that promote creativity and innovation. Debt can limit the creativity of managers to produce unique products or services that customers might want in the market. It is difficult for companies adopting a differentiation strategy to be efficient, because differentiation strategies often lead to a not insubstantial increase in research and development (R&D) expenses necessary to keep up with market needs, placing companies adopting a differentiation strategy at a lower performance level than companies adopting a cost leadership strategy.

**H2:** Differentiation strategy reinforces the negative effect of debt level on firm performance.

The theoretical framework of this research is presented in Figure 1. A high level of debt is expected to enhance firm performance. Differentiation strategy as the moderator is

expected to reinforce the negative influence of debt level on firm performance.

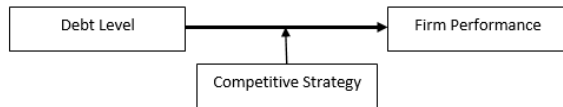


Figure 1. Theoretical

**2. RESEARCH METHOD**

This associative quantitative research was conducted on companies listed on the Indonesia Stock Exchange (IDX) in the 2016-2020 period. The criteria and the results of the purposive sampling applied in this study are presented in Table 1.

**Table 1. Procedure for Sample Selection**

No	Criteria	Number
1.	Companies listed in IDX from 2015 to 2019	750
2.	Financial services firms from 2015 to 2019	(105)
3.	Companies not releasing annual report from 2015 to 2019	(583)
	Number of samples	62
	<b>Number of observations from 2015-2019</b>	310
	<b>Companies that do not provide complete data in the research year</b>	(33)
	<b>Total</b>	<b>277</b>

Source: Processed Data, 2021

Return on assets (ROA), or net profit after tax divided by total assets, is a key indicator of a company's performance. The better the firm performs, the higher its return on total assets (Gitman, L.J.; Zutter, 2012). The return on assets (ROA) enables management and investors to assess how well a company can turn its asset investment into profit.

Financial leverage ratio, or total liabilities divided by total assets, is a measure of debt level. According to IFRS (PSAK 57), debt (liabilities) consists of the company's current commitments that emerge from past events and whose resolution

is anticipated to require the company to expend resources in order to realize economic advantages. An ideal rate of return will also result from the best usage of debt. Long-term debt and short-term debt are both types of debt. The debt proxy used in this research is the financial leverage ratio. Companies with a higher financial leverage ratio use more funds from debt than other sources for project financing and company operations. On the other hand, a lower financial leverage ratio indicates that a company's funds are obtained through internal funding or equity financing. Thus, this ratio will be a direct measure of how much a company is financed by debt. Companies that use debt will get a tax advantage, in that interest payments are deductible from corporate taxes, so as to increase company profit as well as company performance, and debt also allows companies to maintain ownership (Mohammad et al., 2019).

Porter (1980) introduced a framework stating that firms that choose to implement competitive strategies based on cost leadership or differentiation can achieve superior performance. Firms will be categorized on whether they implement a cost leadership strategy or a differentiation strategy using cluster analysis. The purpose of cluster analysis is to group objects on the basis of their characteristics so that objects that have similarities are grouped in a cluster (Ghozali, 2018). The grouping of similar results of observations is based on the correlation between objects, following which it is determined how to form clusters and how many clusters are to be formed. Since the data collected is very diverse, the first step to take is standardization or data transformation with zscore. The second step is to use the zscore results as the basis for cluster analysis. The cluster analysis method used in this study is the K-Means Cluster, where the number of clusters is to be determined first. Two clusters are used in this study, namely the cluster for the differentiation strategy and the cluster for the cost leadership strategy. Based on the number of clusters, a dummy variable is used to facilitate the regression, with a value of 1 for companies with a differentiation strategy and 0 for companies with a cost leadership strategy. This study applies the approach introduced by Singh and Agarwal (2002) and uses three classification variables as in Jermias (2008) research, namely 1) the Intensity

of R&D, which shows a company's competitiveness in terms of product and service innovation, where product differentiation companies are expected to have a higher ratio of R&D intensity than cost leadership companies, 2) Asset Utilization Efficiency (AUE), which shows the importance of achieving efficient company operations through economies of scale in order to provide the lowest prices in the industry, where cost leadership companies are expected to have a higher AUE ratio than product differentiation companies, and 3) Premium Price Capability (PPC), which shows a company's ability to charge premium prices to customers where product differentiation companies are expected to have a higher ratio than cost leadership companies because differentiation companies are able to create unique products or services that customers might want in the market.

This study uses control variables to present a better research model. A variable can be used as a control variable if it has been frequently tested against the dependent variable and if the research results confirm that the variable is influential. This study uses three control variables: firm size, current ratio, growth. Ln of total assets serves as a proxy for firm size. By dividing current assets by current liabilities, one can get the current ratio. To determine growth, divide total annual sales minus total annual sales from the prior year by total annual sales.

This study uses Moderated Regression Analysis. The regression model of this research is as follows:

$$ROA = \alpha + \beta_1 LEV + \beta_2 SIZE + \beta_3 CR + \beta_4 GROWTH + \varepsilon \dots \dots \dots (1)$$

$$ROA = \alpha + \beta_5 LEV + \beta_6 STR + \beta_7 SIZE + \beta_8 CR + \beta_9 GROWTH + \varepsilon \dots \dots (2)$$

$$ROA = \alpha + \beta_{10} LEV + \beta_{11} STR + \beta_{12} LE * STR + \beta_{13} SIZE + \beta_{14} CR + \beta_{15} GROWTH + \varepsilon \dots \dots (3)$$

Notes:

- ROA : Profitability (return on asset)
- LEV : Financial leverage ratio
- STR : Competitive strategy
- SIZE : Firm size
- CR : Current ratio
- GROWTH : Growth rate

### 3. RESULT AND DISCUSSION

#### 3.1. Results

Based on table 4.1, it is known that the number of companies listed on the Indonesia Stock Exchange in the 2015-2019 period is 750. Financial sector companies are excluded from the objects under study because they have different ratio sizes from other types of companies and are sensitive to changes in interest rates and other monetary indicators. 583 companies were eliminated because they did not provide complete data related to the research variables used, meaning that the number of sample companies is 62. Observational data used is obtained from 5 years of observation (2015-2019). Using the purposive sampling method conducted on companies listed on the Indonesia Stock Exchange during the 2015-2019 period, 277 samples were selected for the study, and a list of sample companies is available in Table 2.

The findings of the cluster analysis are displayed in Table 2, where Cluster 1 is distinguished by high R&D and PPC values and low AUE values, and Cluster 2 is distinguished by low R&D and PPC values and high AUE values. From the analysis, it can be concluded that cluster 1 contains companies with a differentiation strategy and cluster 2 contains those with a cost leadership strategy. Corporate strategy is assigned a value of 1 for companies with a differentiation strategy and 0 for companies with a cost leadership strategy. Classification of sample companies into differentiation strategy and cost leadership strategy categories is presented in Table 2.

**Table 2. Classification of Strategies**

No	Zscore	Cluster	
		1 Differentiation Strategy	2 Cost Leadership Strategy
1.	R&D	0,079	-0,260
2.	PPC	0,877	-0,798
3.	AUE	-0,190	0,024
Number of observations		132	145

Source: Processed Data, 2021

**Table 3. Result of Descriptive Statistics**

	Min	Max	Mean	SD
ROA	-93.15	110.2	5.78	11.87
LEV	0.07	3.74	0.51	0.46
STR	0.00	1.00	0.48	0.50
SIZE	11.64	25.10	20.96	3.06
CR	0.11	13.04	2.44	1.85
GROWT H	-0.99	5.73	0.12	0.50

Source: Processed Data, 2021

An overview of the data is provided using descriptive statistics. As shown in Table 3, it consists of the minimum value, maximum value, average value, and standard deviation. Return on assets (ROA), a proxy for firm performance, has a mean value of 5.78 and a standard deviation of 11.87. A modest gap between lowest and maximum values is indicated by the mean values of debt level (LEV), firm size (SIZE), and current ratio (CR), whereas growth rate (GROWTH) has a mean value that is less than the standard deviation.

The dummy variable's assessment of the competitive strategy yields a minimum value of 0 and a maximum value of 1. Based on research done on businesses listed on the IDX between 2015 and 2019, 132 of the sample businesses used a differentiation strategy, while 145 used a cost leadership strategy. Since the median value is 0.48, more businesses are adopting a cost leadership strategy.

Equation (1) is used to test hypothesis 1: the effect of debt level on firm performance. The hypothesis will be accepted if the coefficient of the variable is positive against firm performance. Equation (2) and (3) are used to test hypothesis 2: the moderation of competitive strategy in the effect of debt level on firm performance. The hypothesis will be accepted if the differentiation strategy reinforces the negative effect of debt level on firm performance.

**Table 4. Analysis Result of Regression Model (ROA)**

Variable	Equation 1	Equation 2	Equation 3
LEV (t-value)	0.000* (-5.814)	0.000* (-5.601)	0.000* (-5.053)
SIZE (t-value)	0.078 (1.767)	0.111 (1.600)	0.204 (1.273)

CR (t-value)	0.002* (3.206)	0.002* (3.087)	0.072 (1.804)
GROWT H	0.794	0.757	0.660
(t-value)	(0.261)	(0.310)	(0.440)
STR (t-value)		0.540 (0.613)	
LEV*ST R			0.033* (-2.146)
(t-value)			
F	18.173	14.579	13.084
Sig. F	0.000*	0.000*	0.000*
Adj. R <sup>2</sup>	0.205	0.203	0.214

\*significant at 5%

Source: Processed Data, 2021

The regression model of this study has met the classical assumption test, i.e., normality, multicollinearity, and heteroscedasticity tests. Table 5 briefly presents the results of the hypothesis test. Based on the Table, H1 is not supported, meaning that debt level has a negative effect on firm performance. Differentiation strategy reinforces the negative influence of debt level on firm performance (H2 is supported).

**Table 5. Analysis Result of Regression Model (ROA)**

Hypothesis	Coefficient	Significance	Remark
H1	-8.857	0.000	Rejected
H2	-10.973	0.033	Accepted

Source: Processed Data, 2021

### 3.2. Discussion

Based on the results of the hypothesis testing, debt level negatively influences firm performance (H1 is rejected). This finding is different from the findings of Dinh and Pham, but is consistent with those of Salim Yadav and Ahmed et al., that the greater the firm's debt level, the greater the risk borne by the company. Furthermore, the results of this study do not support the use of debt to reduce monitoring costs arising due to agency problems from the perspective of Agency Theory. Based on the results, debt negatively affects company performance since companies laden with debt tend to face a high risk of default. This risk will increase the possibility of financial distress and bankruptcy. Firms that use debt as an external source of funds must carefully monitor finance costs and ensure that the additional capital

obtained from debt is utilized effectively because the resulting returns might not grow as fast as the company's costs and assets (Ahmed et al., 2018). High debt levels result in high finance costs. High finance costs in turn result in a decrease in firm performance because the expected revenue growth is not proportional to the interest costs incurred by the use of debt.

This study finds that differentiation strategy reinforces the negative effect of debt level on firm performance (H2 is accepted), showing that the differentiation strategy can indeed exacerbate the negative effect of debt levels on the return on assets (ROA) variable (Arping & Lóránth, 2006). Firms that implement a differentiation strategy seek to differentiate themselves from competitors and encourage themselves to create products or services that promote creativity and innovation. But instead, they will see more pronounced negative effects of leverage on ROA. Firms with high debt levels are at risk of low performance. This condition can be further exacerbated if the company also adopts a differentiation strategy. While the form of the possible gain in income is undetermined, the differentiation approach will encourage businesses to invest more money on research and development (R&D) activities. Firms with high debt levels should be prevented from adopting a differentiation strategy that is too drastic because this might worsen the firm performance. In conditions of high debt levels, managers will try to maximize the results of debt issuance and reduce the level of product differentiation in an effort to alleviate customer concerns about the company's viability.

Only the current ratio among the three control variables—firm size (SIZE), current ratio (CR), and growth rate (GROWTH)—affects the success of the company (Table 3). The firm's capacity to meet short-term obligations is shown by its current ratio (debt). The current ratio has a favorable impact on a company's performance. This finding suggests that companies with high current ratios typically manage their current assets better, signify a favorable ability to carry out operational tasks, and ultimately increase corporate performance.

#### 4. CONCLUSION

The conclusions of the study are that a higher level of debt results in correspondingly higher risk

of default and greater possibility of financial difficulties and even bankruptcy. Firms that use debt as an external source of funds must carefully monitor the resulting high finance costs and ensure that the additional capital obtained from debt is utilized effectively. High finance costs in turn produce a decrease in the firm's performance because the expected revenue growth of the firm is not proportional to the interest costs incurred by the use of debt.

The moderating variable of competitive strategy, namely differentiation strategy, can exacerbate the negative effect of debt on company performance. While the potential gain in income is uncertain, the differentiation approach will push businesses to invest more money in research and development (R&D) activities. These activities are recorded by businesses as expenses. In conditions of high debt levels, managers will try to maximize the results of debt issuance and reduce the level of product differentiation in an effort to alleviate customer concerns about the company's viability.

This research is limited to manufacturing companies in the 2015-2019 period; different periods may produce different results. It is recommended for future studies to use measurements of debt level other than financial leverage ratio and to use different periods for more comprehensive findings. The results of this study are expected to be used as input for empirical evidence regarding the moderating role of competitive strategy in influencing the relationship between debt level and company performance and to provide knowledge related to management decisions in implementing corporate strategy and can be used as a consideration in corporate strategic decision making.

#### 5. REFERENCES

- Ahmed, F., Awais, I., & Kashif, M. (2018). Financial Leverage and Firms' Performance: Empirical Evidence from KSE-100 Index. *Etikonomi*, 17(1), 45–56.
- Arping, S., & Lóránth, G. (2006). Corporate leverage and product differentiation strategy. *Journal of Business*, 79(6), 3175–3207. <https://doi.org/10.1086/505253>
- Dinh, H. T., & Pham, C. D. (2020). The effect of capital structure on financial performance of Vietnamese listing pharmaceutical enterprises. *Journal of Asian Finance, Economics and*

- Business*, 7(9), 329–340.  
<https://doi.org/10.13106/JAFEB.2020.VOL7.N09.329>
- Fosu, S., Danso, A., Ahmad, W., & Coffie, W. (2016). Information asymmetry, leverage and firm value: Do crisis and growth matter? *International Review of Financial Analysis*, 46, 140–150.  
<https://doi.org/10.1016/j.irfa.2016.05.002>
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.
- Gitman, L.J.; Zutter, C. . (2012). *Principles of Managerial Finance* (13th ed.). Pearson.
- Jensen, C., & Meckling, H. (1976). *THEORY OF THE FIRM: MANAGERIAL BEHAVIOR , AGENCY COSTS AND OWNERSHIP STRUCTURE I . Introduction and summary In this paper WC draw on recent progress in the theory of ( 1 ) property rights , firm . In addition to tying together elements of the theory of e. 3*, 305–360.
- Jensen, M. C. (1989). Eclipse of the Public Corporation Eclipse of the Public Corporation. *Harvard Business Review*, 67, 61–74.
- Jermias, J. (2008). The relative influence of competitive intensity and business strategy on the relationship between financial leverage and performance. *The British Accounting Review*, 40, 71–86.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53, 433–443.
- Mohammad, H. S., Bujang, I., & Hakim, T. A. (2019). Capital structure and financial performance of Malaysian construction firms. *Asian Economic and Financial Review*, 9(12), 1306–1319.  
<https://doi.org/10.18488/journal.aefr.2019.912.1306.1319>
- Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*.  
<https://doi.org/10.2307/2327916>
- Porter, M. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press.
- Singh, P., & Agarwal, N. C. (2002). The effects of firm strategy on the level and structure of executive compensation. *Canadian Journal of Administrative Sciences*, 19(1), 42–56.  
<https://doi.org/10.1111/j.1936-4490.2002.tb00668.x>