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Revisiting the Role of Corporate Governance: Evidence on R&D, Marketing Intensity, and Profitability in Indonesian Pharmaceutical Firms

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ABSTRACT

Firm profitability is a critical indicator of business sustainability, particularly in competitive industries such as pharmaceutical manufacturing, where innovation, marketing, and governance play essential roles. This study examines the effect of research and development (R&D) expenditure and marketing intensity on firm profitability, with corporate governance as both an independent and moderating variable. Using panel data from pharmaceutical firms listed on the Indonesia Stock Exchange (IDX) for the 2020–2024 period, this study applies Moderated Regression Analysis (MRA). The results show that R&D expenditure ($\beta = 3.392$; $p < 0.001$) and marketing intensity ($\beta = 0.393$; $p = 0.015$) have a significant positive effect on profitability (ROA), while corporate governance also has a significant positive direct effect ($\beta = 2.114$; $p < 0.001$). However, the interaction effects are not significant, indicating that corporate governance does not moderate these relationships. The model is statistically significant ($F = 14.662$; $p < 0.001$) with moderate explanatory power ($R^2 = 0.604$). These findings highlight the importance of strategic investment in innovation, marketing, and governance. This study contributes to the literature by positioning corporate governance as an independent determinant rather than a moderating mechanism and provides practical implications for improving firm performance.

Keywords: Corporate Governance; Marketing Intensity; Moderating Effect; Profitability; R&D Expenditure

INTRODUCTION

Corporate governance plays a crucial role in enhancing an organization's transparency, accountability, and overall effectiveness (OECD, 2015). In the context of increasing competition, businesses in Indonesia are required to manage their resources efficiently to maintain profitability and competitiveness. Two commonly adopted strategies are increasing marketing intensity and investing in research and development (R&D). Marketing activities contribute to strengthening market position and generating revenue, while R&D investment supports innovation and long-term value creation. However, empirical findings remain inconclusive regarding the extent to which these strategies influence firm profitability.

The inconsistency in prior research suggests that the effectiveness of R&D expenditure and marketing intensity depends not only on the scale of investment but also on how these resources are managed within the organization. Previous studies indicate that strong corporate governance can improve the quality of strategic decision-making and enhance efficiency in resource allocation (Lestari et al., 2024; Nag & Chatterjee, 2020; Tumiwa & Mamuaya, 2018). Moreover, effective governance mechanisms may strengthen the positive impact of business strategies on financial performance by improving managerial oversight and mitigating agency conflicts between principals and agents (Gita & Prasetio, 2024; Yi, 2023). In contrast, weak corporate governance may lead to inefficiencies in resource utilization and ultimately reduce firm profitability (Guluma, 2021).

Based on these considerations, this study is significant as it examines the effects of marketing intensity and R&D expenditure on firm profitability, while also evaluating the moderating role of corporate governance. Specifically, this study analyzes how marketing intensity, R&D expenditure, and corporate governance interact in influencing firm performance. The study contributes to the literature by providing a deeper understanding of the moderating role of corporate governance in strategic decision-making, particularly within pharmaceutical companies listed on the Indonesia Stock Exchange (IDX), focusing on the manufacturing subsector. Furthermore, the findings are expected to offer practical insights for managers and stakeholders in improving financial performance through the enhancement of corporate governance practices.

LITERATURE REVIEW

Spending on Research and Development and Profitability

Spending on research and development (R&D) represents a strategic investment that enhances a firm's competitive advantage by fostering innovation, improving product quality, and streamlining operational processes. Through continuous innovation, firms are able to differentiate their products, respond to dynamic market conditions, and improve operational efficiency, which ultimately contributes to higher financial performance. Prior studies indicate that firms with higher R&D investment tend to achieve superior long-term profitability, as innovation outcomes generate sustainable value and competitive advantages (Curtis et al., 2020). Empirical evidence from emerging economies also supports a positive relationship between R&D expenditure and profitability, suggesting that firms investing in R&D are better positioned to enhance their performance (Vurur & Ilarslan, 2016). However, R&D investment involves a high degree of uncertainty, long gestation periods, and substantial risk, which often results in delayed returns (Sulimany, 2025). Therefore, R&D expenditure is widely recognized as a key driver of long-term profitability, particularly when supported by effective management and efficient resource allocation.

Marketing Intensity and Profitability

Marketing intensity reflects the extent to which firms allocate resources to marketing activities in order to strengthen market presence, enhance brand equity, and stimulate sales growth. Firms with higher marketing intensity are more likely to increase customer engagement, expand market reach, and establish a stronger competitive position, which ultimately leads to improved financial performance (Glickman, 2018). In the contemporary business environment, digital marketing has become a critical driver of firm performance, enabling companies to target customers more effectively and enhance operational efficiency (Hadiyati & Mulyono, 2024). Furthermore, the integration of advanced technologies, such as artificial intelligence, into marketing strategies improves decision-making, personalization, and market responsiveness, thereby supporting business growth and profitability (Harshitha et al., 2025). Previous studies also demonstrate that firms adopting digital marketing and innovation strategies are more likely to achieve sustained profitability and long-term success (Yuliawati et al., 2025). However, the effectiveness of marketing intensity depends on efficient resource management, as excessive or poorly targeted marketing expenditures may reduce profitability. Therefore, marketing intensity can be considered a significant determinant of profitability when supported by effective strategic planning and resource allocation.

Corporate Governance as a Moderating Variable

Corporate governance plays a critical role in determining the effectiveness of a firm's strategic decisions, particularly in managing the relationship between investment activities and financial performance. As a moderating variable, corporate governance can either strengthen or weaken the impact of strategic investments—such as R&D expenditure and marketing intensity—on profitability. Effective governance mechanisms, including board oversight, transparency, and ownership structure, contribute to reducing agency conflicts and enhancing the efficiency of resource allocation, thereby improving the outcomes of corporate strategies (Monks & Minow, 2011).

This moderating role is supported by empirical evidence. Mishra et al. (2025) argue that strong corporate governance enhances decision-making quality and reduces managerial opportunism, thereby increasing the effectiveness of innovation-related strategies. Similarly, Khatib (2025) emphasizes the importance of governance structures in ensuring reliable decision-making and minimizing biases arising from endogeneity and managerial discretion. These findings suggest that firms with strong governance frameworks are better positioned to maximize the benefits of strategic investments. Therefore, corporate governance is expected to moderate the relationship between R&D expenditure, marketing intensity, and firm profitability.

Agency Theory

Agency Theory explains the contractual relationship between principals (shareholders) and agents (managers), in which managers are delegated authority to make decisions on behalf of owners. This relationship often gives rise to agency conflicts, as managers may prioritize personal interests over the objective of maximizing shareholder value. Such conflicts are exacerbated by information asymmetry, where managers possess more complete information about the firm than principals, potentially leading to inefficient decision-making, particularly in strategic investments such as R&D and marketing expenditures.

To mitigate these issues, firms implement corporate governance mechanisms—including board oversight, audit committees, and ownership structures—to monitor managerial actions and align them with shareholders' interests. These mechanisms reduce agency costs and improve decision quality. Empirical studies support this

perspective, showing that effective corporate governance enhances financial performance by mitigating agency conflicts and strengthening managerial accountability (Gita & Prasetio, 2024; Lestari et al., 2024). Furthermore, Soni et al. (2024) highlight the role of governance in ensuring efficient allocation of marketing resources, while Sulimany (2025) demonstrates that weak governance reduces the effectiveness of R&D investments despite their long-term potential. Similarly, Omenihu and Nwafor (2025) find that governance structures, particularly board effectiveness, significantly influence how managerial decisions translate into firm performance. Therefore, Agency Theory suggests that the success of strategic investments depends not only on the magnitude of expenditure but also on the strength of governance mechanisms in aligning managerial actions with long-term firm value.

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory emphasizes how firms utilize internal resources to achieve competitive advantage and enhance performance (Barney, 1991). In this context, R&D expenditure and marketing intensity are considered strategic resources that contribute to firm performance when effectively managed. The effectiveness of these resources is further enhanced by strong corporate governance, which ensures optimal utilization and alignment with organizational objectives.

Relationship Between Variables and Research Hypotheses

R&D Expenditure and Profitability

R&D expenditure represents a significant investment aimed at fostering innovation through product development, process improvement, and the enhancement of innovation capabilities (Laeven & Levine, 2008). From the RBV perspective, increased R&D investment provides firms with a competitive advantage, leading to improved profitability through higher revenues and operational efficiency. From the Agency Theory perspective, the impact of R&D expenditure on profitability depends on the firm's ability to manage agency conflicts and ensure that investment decisions are aligned with value creation objectives. Rahman and Howlader (2022) find a significant positive relationship between R&D expenditure and firm profitability. However, Sulimany (2025) notes that although R&D investment enhances long-term profitability and firm value, its impact may not be immediately observable due to high risk and delayed returns.

H1: R&D expenditure has a significant positive effect on profitability.

Marketing Intensity and Profitability

Marketing intensity may have a negative impact on profitability if it is treated solely as a cost, particularly when expenditures do not translate into immediate revenue gains. Garbıah and Levent (2021) show that excessive marketing spending without effective strategy and management may reduce profitability, especially in highly competitive markets. However, when properly managed, marketing intensity can increase product awareness, strengthen brand equity, expand market share, and drive sales growth, thereby improving profitability. Empirical evidence from Markovitch et al. (2020) and Soni et al. (2024) supports a positive relationship between marketing intensity and firm performance.

H2: Marketing intensity has a significant positive effect on profitability.

Corporate Governance as a Moderator of the Relationship between R&D Expenditure and Profitability

R&D expenditure is a high-risk investment due to its significant initial costs and uncertain returns. According to Agency Theory, ineffective governance may lead to poor project

selection and opportunistic managerial behavior, thereby weakening the relationship between R&D expenditure and profitability. Busru and Shanmugasundaram (2017) find that larger board sizes without effective control mechanisms may exacerbate the negative impact of R&D expenditure on profitability. However, from the RBV perspective, strong corporate governance—characterized by an independent board, optimal board size, active institutional ownership, and appropriate incentive structures—can enhance the effectiveness of R&D investment, leading to improved profitability. He (2023) confirms that corporate governance strengthens the relationship between R&D expenditure and firm performance.

H3: Corporate governance strengthens the effect of R&D expenditure on profitability.

Corporate Governance as a Moderator of the Relationship between Marketing Intensity and Profitability

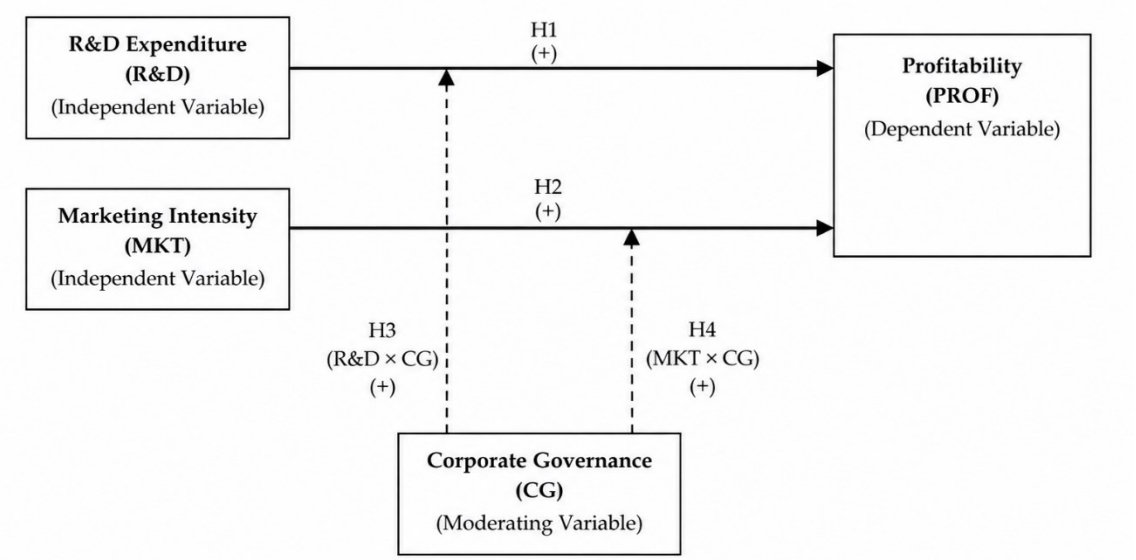
Marketing intensity can improve profitability by enhancing marketing effectiveness, strengthening brand positioning, and expanding market share (Markovitch et al., 2020). However, its impact depends on managerial capability and the quality of corporate governance in managing marketing resources. Effective governance enhances the positive impact of marketing intensity through better monitoring, decision-making, and resource utilization (Guluma, 2021; Nag & Chatterjee, 2020). Conversely, overly rigid governance structures may limit managerial flexibility and reduce marketing effectiveness, potentially lowering profitability (Omenihu & Nwafor, 2025). Therefore, corporate governance plays a moderating role in the relationship between marketing intensity and firm profitability.

H4: Corporate governance strengthens the effect of marketing intensity on profitability.

Conceptual Framework

The study framework model is depicted in Figure 1.

Figure 1. Research Framework



Notes:
(+) indicates a positive relationship.
Solid lines indicate direct effects, while dashed lines indicate moderating effects.

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RESEARCH METHOD

This study employs a quantitative research approach to examine the effects of independent variables on the dependent variable, as well as the moderating role of corporate governance. The study utilizes panel data, consisting of observations across firms over a specific period from 2020 to 2024. The population includes all pharmaceutical manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the observation period.

A census sampling technique is applied, in which all members of the population are included in the sample. This approach is selected due to the relatively small population size and to ensure a comprehensive representation of the research object. Consequently, the sample consists of firms that are consistently listed on the IDX and provide complete data required for this study throughout the observation period.

This study uses secondary data obtained from annual reports and financial statements published on the IDX official website (www.idx.co.id) and the respective companies' official websites. The data are processed using SPSS version 27. The analytical method employed is multiple linear regression with moderation testing using Moderated Regression Analysis (MRA), which involves the construction of interaction terms between R&D expenditure, marketing intensity, and corporate governance.

Research Variables

Profitability

Profitability reflects a firm's ability to generate earnings from its resources over a given period (Brigham & Houston, 2019). In this study, profitability is measured using Return on Assets (ROA), calculated as net income after tax divided by total assets (Ross et al., 2019). The data are obtained from the firms' annual financial statements.

R&D Expenditure

R&D expenditure represents the firm's investment in innovation-related activities aimed at enhancing performance (Harmasanto & Setiawan, 2019). It includes costs associated with product development, experimentation, and innovation processes (Rosidi & Qurotuaini, 2022). R&D intensity is measured as the ratio of total R&D expenditure to total revenue. The data are sourced from annual reports and notes to financial statements.

Marketing Intensity

Marketing intensity refers to the proportion of resources allocated to marketing activities relative to firm revenue. It is measured as the ratio of marketing expenses to total revenue (Kotler & Keller, 2016; Grewal & Levy, 2020). The data are obtained from income statements and annual reports.

Corporate Governance

Corporate governance refers to the system by which firms are directed and controlled through the relationships between management, the board of directors, and shareholders (OECD, 2025). In this study, corporate governance is measured using several proxies, including board size, audit committee size, institutional ownership, and managerial ownership. These variables are quantified using numerical values and percentage-based measures derived from annual reports.

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RESULTS

Descriptive Statistics

Table 1 below displays statistical information on the research variables.

Table 1. Descriptive Statistics

Variable	Mean	Std. Deviation	N
Profitability	6.957	3.232	54
Centered_RD	0.000	0.508	54
Centered_IP	0.000	2.332	54
Centered_GC	0.000	0.632	54
Interaction_RD_GC	0.084	0.303	54
Interaction_IP_GC	-0.035	1.484	54

The profitability variable (ROA) has an average value of 6.957 with a standard deviation of 3.232, as presented in Table 1. This indicates that there is variability in the profitability levels among the sampled firms. The variables of R&D expenditure, marketing intensity, and corporate governance show average values that are relatively close to zero, with considerable variation across observations. Furthermore, the interaction terms also exhibit substantial variation, indicating that the data are suitable for Moderated Regression Analysis (MRA) and subsequent hypothesis testing.

Hypothesis Testing

Following the presentation of descriptive statistics, the validity of the regression model was assessed through classical assumption tests. These tests include normality, multicollinearity, heteroscedasticity, and autocorrelation, to ensure that the model meets the requirements for reliable regression analysis.

Normality Test

The results of the normality test indicate that the standardized residuals in the regression model, with profitability as the dependent variable, are normally distributed. The Normal P–P Plot of Regression Standardized Residuals generated using SPSS shows that the data points closely follow the diagonal line, indicating a strong alignment between observed and expected probabilities. This suggests that there is no significant deviation from the normality assumption, and the model is appropriate for further analysis.

Multicollinearity Test

The multicollinearity test was conducted using Variance Inflation Factor (VIF) and tolerance values to ensure that there is no high correlation among the independent variables. The results of this test are presented in Table 2.

Table 2. Multicollinearity Test Results

Model		Tolerance	VIF
1	(Constant)		
	Centered_RD	0.699	1.432
	Centered_IP	0.657	1.521
	Centered_GC	0.754	1.326
	Interaction_RD_GC	0.704	1.421
	Interaction_IP_GC	0.556	1.797

a. Dependent variable: Profitability

The results of the multicollinearity test presented in Table 2 indicate that all variables have tolerance values greater than 0.10 and Variance Inflation Factor (VIF) values below 10. Specifically, tolerance values range from 0.556 to 0.754, while VIF values range from 1.326 to 1.797. These findings suggest that there is no multicollinearity issue in the regression model.

The highest VIF value is observed in the interaction term IP × CG (1.797), whereas the lowest VIF value is found in the corporate governance (CG) variable (1.326). Overall, these results confirm that multicollinearity does not affect the regression model, indicating that the model is suitable for further analysis and interpretation.

Heteroscedasticity Test

The heteroscedasticity test, based on the analysis of standardized residual scatterplots, shows that the residuals are randomly and evenly distributed without forming any specific pattern. This indicates the absence of heteroscedasticity and confirms that the variance of the residuals is constant (homoscedastic).

Since this assumption is satisfied, the regression model is considered appropriate, and the estimated parameters, as well as the results of hypothesis testing, can be interpreted reliably.

Autocorrelation Test

An appropriate regression model should be free from autocorrelation. Autocorrelation occurs when residuals are correlated across observations, which may lead to biased estimates. The presence or absence of autocorrelation is typically assessed using the Durbin–Watson (DW) statistic.
The results of the autocorrelation test are presented in Table 3.

Table 3. Regression Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	Durbin-Watson
1	0.664[a]	0.441	0.419	2.46434	0.456

a. Predictors: (Constant), Centered_IP, Centered_RD
b. Dependent Variable: Profitability

Based on the Durbin–Watson test results presented in Table 3, the obtained value is 0.456, which is below the lower critical value (dL), indicating the presence of positive autocorrelation in the regression model. This finding suggests that the residuals are not independent and that further treatment is required to address the autocorrelation issue. Nevertheless, the model remains statistically significant based on the ANOVA results.

The Moderated Regression Analysis (MRA) conducted using SPSS version 27 also identified one outlier, namely the 10th observation with a marketing intensity (IP) value of 1002.00, which was subsequently excluded from further analysis to improve the accuracy of the model. To reduce the risk of multicollinearity, the independent and moderating variables were mean-centered by subtracting each observation from the respective variable's mean (Hayes, 2020). This procedure is commonly applied in moderation analysis to minimize collinearity between interaction terms and their constituent variables.

The regression analysis was conducted in two stages. The first stage involved estimating the model without the moderating variable to examine the direct effects of the independent variables on the dependent variable. The second stage incorporated the

moderating variable along with the interaction terms to assess the moderating effects. The initial regression analysis, without the inclusion of the moderating variable, was conducted to evaluate the direct effects of the independent variables on the dependent variable, and the results are presented in Table 4.

Table 4. First Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	sig
		B	Std. Error	Beta		
1	(Constant)	6.957	0.335		20.744	0.000
	Centered_RD	4.167	0.669	0.655	6.230	0.000
	Centered_IP	0.245	0.146	1.78	1.679	0.000

Based on the statistics provided in the above table, the regression equation is:

$$ROA(Y2) = 6.957 + 4.167\ X1 + 0.245\ X2$$

The regression equation indicates that R&D expenditure and marketing intensity have a positive effect on Return on Assets (ROA), with R&D expenditure showing a stronger influence. The constant value of 6.957 represents the level of ROA when all independent variables are equal to zero, while the coefficient of marketing intensity (0.245) indicates a relatively smaller positive effect on profitability.

The multicollinearity test results show a Variance Inflation Factor (VIF) value of 1.007 and a tolerance value of 0.993, indicating the absence of multicollinearity issues. These findings confirm that the regression model is appropriate for further analysis.

Table 5 presents the results of the second regression analysis, which includes the independent variables, dependent variable, moderating variable, and interaction terms.

Table 5. Moderated Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	sig
		B	Std. Error	Beta		
1	(Constant)	6.789	0.306		22.151	0.000
	Centered_RD	3.392	0.691	0.533	4.906	0.000
	Centered_IP	0.393	0.155	0.283	2.530	0.015
	Centered_GC	2.114	0.535	0.413	3.952	0.000
	Centered_RD_GC	2.040	1.153	0.192	1.769	0.083
	Centered_IP_GC	0.70	0.265	0.032	0.262	0.794

Based on the above statistics, the following regression equation is obtained:

$$ROA(Y2) = 6.789 + 3.392\ X1 + 0.393\ X2 + 2.114\ Y1 + 2.040\ X1Y1 + 0.070\ X2Y1$$

The regression equation shows that the constant value of 6.789 represents the level of Return on Assets (ROA) when R&D expenditure (X1), marketing intensity (X2), corporate governance (Y1), and their interaction terms are equal to zero. R&D expenditure has a positive effect on ROA with a coefficient of 3.392, indicating a relatively strong influence. Marketing intensity also has a positive effect, with a coefficient of 0.393, while corporate governance contributes positively with a coefficient of 2.114.

However, the interaction between R&D expenditure and corporate governance (X1Y1) shows a positive coefficient of 2.040 but is not statistically significant. Similarly, the interaction between marketing intensity and corporate governance (X2Y1) also has a positive but very small and statistically insignificant coefficient of 0.070. These results indicate that, although R&D expenditure, marketing intensity, and corporate governance directly affect ROA, the moderating role of corporate governance is not statistically supported.

In addition, the multicollinearity test results indicate no multicollinearity issues in the regression model.

Concurrent Hypothesis (F-test)
The F-test is conducted by comparing the significance value of the F-statistic with a predetermined significance level of 0.05. If the significance value is less than or equal to 0.05, the independent variables simultaneously have a significant effect on the dependent variable. Conversely, if the significance value is greater than 0.05, no significant effect is observed. Based on the F-test results presented in Table 6, the regression model is statistically significant and can be considered appropriate and reliable for further analysis.

Table 6. Model Fit Summary (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	334.614	5	66.923	14.662	0.000[b]
	Residual	219.092	48	4.564		
	Total	553.706	53			

a. Dependent Variable: Profitability
b. Predictor: (Constant) Interaction_IP_GC, Interaction_RD_GC, Centered GC, Centered RD, Centered_IP

The regression model demonstrates overall significance, as shown in Table 6, with an F-value of 14.662 and a significance level of 0.000 (< 0.05). This result indicates that all independent variables, including their interaction effects, simultaneously have a significant influence on profitability. Therefore, the model is considered statistically reliable and appropriate for further analysis.

Coefficient of Determination (R^2)
The coefficient of determination (R^2) test is used to evaluate the extent to which the regression model explains the variation in the dependent variable. The results of this analysis are presented in Table 7.

Table 7. Regression Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	Durbin–Watson
1	0.664	0.441	0.419	2.464	0.456

Predictors: (Constant), Interaction_IP_GC, Interaction_RD_GC, Centered_GC, Centered_RD, Centered_IP, Dependent Variable: Profitability

According to the coefficient of determination (R^2) test, the R Square value of 0.604 indicates that 60.4% of the variation in profitability can be explained by the independent variables and their interaction effects, while the remaining 39.6% is influenced by factors not included in the model. Furthermore, the Adjusted R Square value of 0.563 reflects

the model's explanatory power after adjusting for the number of predictors, suggesting a moderate level of explanatory strength.

In addition, the Durbin–Watson statistic of 0.522 indicates the presence of positive autocorrelation in the residuals. This suggests that the assumption of independence may be violated, and therefore, this issue should be considered and addressed in future research to improve model robustness.

DISCUSSION

The Effect of R&D Spending on Profitability

The findings of this study indicate that R&D spending has a significant positive effect on profitability, as measured by Return on Assets (ROA). This result suggests that investments in research and development enhance firms' ability to utilize their assets more efficiently through innovation in products and processes, ultimately leading to increased revenue generation. From a theoretical perspective, this finding supports the Resource-Based View (RBV) proposed by Barney (1991), which posits that firm-specific resources that are valuable, rare, inimitable, and non-substitutable serve as sources of sustained competitive advantage.

In this context, R&D investment represents a strategic intangible asset that strengthens a firm's long-term competitiveness. The results also imply that companies that consistently invest in innovation are more likely to achieve superior financial performance. Therefore, R&D spending should not be viewed merely as a cost, but rather as a strategic investment that contributes to value creation and long-term profitability.

Impact of Marketing Intensity on Profitability

The empirical results further demonstrate that marketing intensity has a significant positive effect on profitability. This finding indicates that increased marketing expenditure contributes to higher brand awareness, stronger market positioning, and improved customer engagement, which in turn enhances asset utilization efficiency. The result is consistent with prior empirical research, such as the study by Markovitch et al. (2020), which confirms that marketing investment positively influences firm performance based on actual expenditure data.

However, the relatively moderate coefficient suggests that the marginal returns of marketing investment may diminish beyond a certain level. This implies that firms need to allocate marketing resources strategically to ensure optimal effectiveness (Chen et al., 2012). Inefficient or excessive marketing spending may not proportionally increase profitability, highlighting the importance of data-driven marketing strategies and performance evaluation mechanisms.

The Effect of Corporate Governance on Profitability

The results also reveal that corporate governance has a significant positive effect on profitability. This finding supports the Agency Theory introduced by Michael C. Jensen and William H. Meckling (2019), which explains that effective governance mechanisms help reduce agency conflicts between managers and shareholders, thereby improving decision-making quality and resource allocation efficiency.

Furthermore, the findings are consistent with previous studies, including those by Raktim Nag and Sambit Chatterjee (2020), as well as Guluma (2021), which demonstrate that strong corporate governance practices positively influence firm performance. This

suggests that corporate governance not only serves as a compliance mechanism but also acts as a strategic tool to enhance operational efficiency and financial outcomes.

The Role of Corporate Governance as a Moderating Variable

The moderation analysis indicates that corporate governance does not significantly moderate the relationship between R&D spending, marketing intensity, and profitability (ROA). This finding suggests that corporate governance functions primarily as an independent determinant of firm performance rather than as a contingent factor that strengthens or weakens the impact of strategic investments.

This result is in line with prior studies, such as those conducted by Lu (2021) and Ngatno et al. (2020), which argue that the moderating role of corporate governance is context-dependent and may not always be statistically significant. One possible explanation is that governance mechanisms tend to focus more on oversight and compliance rather than actively influencing strategic decisions such as long-term R&D investments or short-term marketing expenditures.

Consequently, traditional corporate governance frameworks may not be sufficiently adaptive to capture the dynamic and heterogeneous nature of strategic resource allocation. This highlights the need for more flexible and integrative governance models that can effectively align innovation strategies and marketing initiatives with organizational objectives.

CONCLUSION

This study concludes that R&D spending, marketing intensity, and corporate governance each have a significant positive effect on firm profitability, as measured by Return on Assets (ROA), highlighting the importance of strategic resource allocation in innovation, marketing activities, and governance practices to enhance financial performance. R&D investment contributes to long-term value creation through innovation and improved efficiency, while marketing intensity strengthens market positioning and revenue generation; simultaneously, corporate governance enhances organizational effectiveness by reducing agency conflicts and improving resource allocation. However, the findings also reveal that corporate governance does not significantly moderate the relationship between R&D spending and marketing intensity on profitability, indicating that it functions primarily as an independent determinant rather than a contingent mechanism. From a theoretical perspective, these results reinforce the relevance of the Resource-Based View (RBV) and Agency Theory, while also suggesting limitations in the moderating role of governance structures within strategic investment contexts. Practically, this study implies that managers should carefully balance investments in R&D and marketing while continuously strengthening corporate governance practices, and future research is encouraged to incorporate additional variables, broader datasets, and more adaptive governance frameworks to better understand the complex dynamics influencing firm profitability.

LIMITATION

This study has several limitations that should be considered when interpreting the findings. First, corporate governance is measured using general indicators, which may not fully capture specific governance mechanisms relevant to particular strategic functions. For instance, more specialized governance structures, such as marketing committees or targeted control systems for marketing activities, may provide deeper insights into the moderating role of governance.

Future research is encouraged to explore the possibility of threshold effects, whereby corporate governance may exert a significant influence only after certain levels of marketing or R&D expenditure are reached. In addition, further studies may consider incorporating alternative moderating variables, such as market orientation, marketing capabilities, or organizational learning, to better explain the relationship between strategic investments and firm performance.

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