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Firm Performance: Exploring International Diversification, Financial Leverage, and Board of Directors in the Energy Sector

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ABSTRACT

This study examines the impact of international diversification, financial leverage, and board composition on the performance of energy sector companies listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022. Using panel data regression with the Random Effects Model (REM), the analysis includes data from 54 energy companies over a five-year period, resulting in 270 observations. The findings indicate that international diversification does not exert a significant influence on firm performance. Conversely, financial leverage has been demonstrated to exert a deleterious influence on firm performance. Furthermore, the size of the board of directors was found to have no significant impact on firm performance. These findings underscore the necessity for energy sector companies to prioritize core business operations, exercise financial responsibility, and enhance governance practices. By integrating variables that are typically studied separately, this study offers new insights into the determinants of firm performance in the energy sector. The research offers a novel theoretical perspective by combining international diversification, financial leverage, and board composition into a single analytical framework, thereby addressing a gap in the existing literature. To further develop these findings, future research should investigate additional variables, such as macroeconomic conditions and government policies, in order to gain a more comprehensive understanding of the factors that influence firm performance in the energy sector.

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1. INTRODUCTION

Macro-level accounting challenges frequently emerge due to a lack of preparedness among companies to navigate the rapid shifts in global market dynamics, limited financial transparency, and increasing regulatory pressures. In the energy sector, in particular, the transition towards environmentally sustainable policies, such as the achievement of net-zero emissions (NZE), necessitates the adaptation of accounting practices on the part of companies. Such adaptation is imperative to reflect changes in asset values, an increased debt burden, and a more complex risk management framework. The inability to produce accurate and relevant financial statements can impede strategic decision-making, erode a company's competitiveness in the global market, and undermine investor confidence.

The Net-Zero Emission (NZE) initiative is designed to reduce greenhouse gas emissions that contribute to global environmental damage (Matemilola & Salami, 2020). In a commitment made in 2022 by the Indonesian Ministry of Finance(Kemenkeu, 2022). the country has pledged to achieve net-zero emissions by 2060. However, the implementation of the NZE policy is anticipated to have far-reaching implications for the global coal industry, because the coal industry is included in mining companies that have an important role in the energy sector (Fadila et al., 2024). As indicated by the International Energy Agency's (IEA) Net-Zero Outlook for 2050, coal is anticipated to play a diminished role in the global energy system across all scenarios(KESDM, 2021). Such a shift may have significant implications for the performance of energy sector companies in Indonesia.

In this context, several key factors—namely international diversification, financial leverage, and board governance—are of significant importance in determining the performance of a firm. International diversification refers to a company's expansion beyond its domestic market, which can create growth opportunities while also introducing additional risks (Yen & Lin, 2021). The extent to which the company's ability to utilize debt financing for operational activities, otherwise known as financial leverage, has the potential to exert a considerable influence on a firm's financial stability and overall performance (Kasibi et al., 2023; Safitri & Yuliana, 2021). Furthermore, the structure and composition of the board of directors, who provide oversight and strategic guidance, are also of pivotal importance with regard to a company's performance (Septiana & Aris, 2023). It is of the utmost importance to gain a comprehensive understanding of the manner in which these factors interact and affect firm performance, in order to be able to formulate effective strategies to navigate the evolving landscape of the energy sector.

Previous research has frequently examined international diversification, financial leverage, and board governance in isolation, without considering the potential interactions and cumulative effects of these variables. This gap is particularly significant in the energy sector, given the sector's capital-intensive nature and the heavy regulatory pressures it faces (Agustin & Setiawan, 2021; Batsakis et al., 2018). Moreover, the majority of studies have concentrated on developed markets, with a paucity of focus on emerging markets such as Indonesia. This study aims to address this gap by integrating these factors into a unified analytical framework, thereby offering new theoretical insights into the determinants of firm performance in the energy sector. By integrating international diversification, financial leverage, and board governance into a unified framework, this research contributes to the existing literature with a more nuanced understanding of the interplay between these factors.

The principal aim of this study is to examine the influence of international diversification, financial leverage and board governance on the performance of energy sector companies listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022. The study aims to provide a comprehensive understanding of the manner in which these factors interact and influence firm performance, thereby offering valuable insights for strategic decision-making in the energy sector. It is anticipated that the findings will inform the improvement of management accounting practices, particularly in

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areas related to measuring financial risk and adjusting asset valuations in response to global market dynamics.

2. METHODS

The research employs secondary data, comprising literature, articles, journals, and other internet sources pertinent to the research topic (Novalia et al., 2021). This study examines the factors that affect the performance of energy sector companies, with a particular focus on international diversification, financial leverage, and board governance as independent variables. The study population comprises 62 energy sector companies listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022. A simple random sampling technique was employed, and the Slovin formula was used to select a sample of 54 companies. The observation period covered five years, resulting in a total of 270 observations. Data were collected from credible sources, including the IDX official website, company websites, and other legally recognised sources.

Table 1. Variable formulas

No	Variable	Definition	Formula	Reference
1	Firm Performance	The level of success achieved by a company in meeting its strategic goals is measured.	$\frac{(Total\ Market\ Value) + Total\ Utang}{Total\ Asset}$	(Ekadjaja et al., 2021; Pangestuti et al., 2023)
2	International Diversification	The extent to which the company expands by attempting to enter markets in other countries with different conditions.	1 = There is an international diversification strategy 0 = No international diversification strategy	(Pangestuti et al., 2024; Wu et al., 2019)
3	Financial Leverage	Indicates that the company is using debt to gain access to additional funds in the form of assets.	$\frac{Book\ Value\ of\ Liabilities}{Market\ Value\ of\ Equity}$	(Pangestuti et al., 2023; Shaikh et al., 2022)
4	Board of Directors	A part of the company established to carry out the company's objectives in its affairs and to protect the interests of all business stakeholders.	Number of board of directors	(Sanyaolu et al., 2021; Vitolla et al., 2020)

The panel data regression method, specifically the random effects model (REM), was selected for this study due to its capacity to integrate both cross-sectional and time-series data, thereby facilitating a more comprehensive analysis of the relationships between variables. This method accounts for individual heterogeneity across companies as well as temporal variations, thereby enhancing the precision of the analysis in evaluating the influence of international diversification, financial leverage, and board composition on company performance. Accordingly, the REM is especially well-suited for elucidating the intricate and evolving interrelationships within the energy sector.

The data were analysed using Microsoft Excel and E-Views 12 software. The study commenced with the implementation of descriptive statistical tests, which were followed by model selection tests with the objective of identifying the most appropriate model for the data. Subsequently, hypothesis testing was conducted, comprising partial tests and a coefficient of determination (R^2) test. Partial tests were employed to evaluate the impact of each independent variable on the dependent variable (Maknunah & Sudiasmo, 2020). The hypothesis was tested by comparing the t-statistic (t_{count}) with the critical t-value (t_{table}). If the calculated t-value (t_{count}) is greater than the critical t-value (t_{table}), then the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected, indicating a significant relationship between the variables. Conversely, if the calculated t-value is less than the critical t-value, then the null hypothesis is accepted and the alternative hypothesis is rejected. The coefficient of determination (R^2) was employed to ascertain the proportion of variation in the dependent variable that can be attributed to the independent variables (Yanti, 2020). A low R^2 value indicates that the independent variables have a limited capacity to account for the variations in the dependent variable.

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3. RESULTS AND DISCUSSION

3.1. Descriptive Analysis

Table 2. Descriptive statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
Firm Performance	0.180000	20.250000	1.626963	1.806278
International Diversification	0.000000	1.000000	0.403704	0.491551
Financial Leverage	0.010000	10.270000	1.873000	2.202132
Board of Directors	2.000000	11.000000	4.159259	1.709531

Source: Processed secondary data (2023)

Tabel 3. Tabulation of international diversification dummy variables

Variabel Dummy	Frequency	Percent	Cummulative Percent
0	166	61%	61%
1	104	39%	100%
Total	270	100%	

Source: Processed secondary data (2023)

The variable representing firm performance, measured by Tobin's Q, exhibits a mean value of 1.63 and a standard deviation of 1.81. These statistics indicate a considerable degree of variability within the dataset, with notable disparities between the highest and lowest Tobin's Q values. For example, in 2018, Alfa Energi Investama Tbk. recorded the highest Tobin's Q value of 20.25, indicating that the firm's market value (FIRE) was considerably higher than the replacement cost of its assets. This elevated Tobin's Q indicates that the market may have placed a high valuation on the company's financial performance or growth potential, reflecting substantial investor confidence. Conversely, Sumber Energi Andalan Tbk. recorded the lowest Tobin's Q value of 0.18 in 2020, indicating that the company's market value (ITMA) was considerably lower than the replacement cost of its assets. A low Tobin's Q may be indicative of a lack of market confidence in the company's current value or future growth prospects. The stark contrast between these two extremes serves to illustrate the considerable variability in market perceptions of firm performance and growth potential within the energy sector.

The degree of international diversification is quantified using a dummy variable, whereby a value of 1 is attributed to companies with international subsidiaries and 0 to those without. A review of data from 270 companies observed during the period 2018–2022 revealed that 166 companies, representing 61% of the sample, did not pursue international diversification. This finding indicates that the majority of energy sector companies are inclined to eschew the additional risks and complexities associated with expanding their operations to international markets. Conversely, 104 companies, representing 39% of the sample, have pursued international diversification by establishing subsidiaries abroad. This suggests that a significant proportion of companies are pursuing a strategic expansion into international markets as a means of mitigating operational and financial risks. Nevertheless, international diversification remains relatively limited within the sector.

The mean financial leverage for the energy sector companies observed during the period 2018–2022 was 1.87, with a standard deviation of 2.20. The discrepancy between the mean and the standard deviation demonstrates a considerable range between the highest and lowest financial leverage values observed across the companies. To illustrate, ITMA exhibited the lowest financial leverage value of 0.01 throughout the period from 2018 to 2020. This markedly low financial

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leverage indicates that the company in question has a preference for utilising its own capital resources in preference to external funding sources. This is demonstrated by the fact that ITMA's total debt was persistently less than its market capitalisation, indicating a cautious approach to capital structure. In contrast, Bumi Resources Tbk. recorded the highest financial leverage value of 10.27 in 2021. This high level of leverage indicates that the company is heavily reliant on external financing, with total debt significantly exceeding its market capitalisation. This strategy indicates that Bumi Resources prefers to access additional assets through borrowing rather than relying solely on internal funds. The stark contrast between these two companies highlights the diverse financial strategies employed within the energy sector, which range from conservative to highly leveraged approaches. These strategies are shaped by differing operational needs and risk preferences.

The mean value of the board size variable is 4.16, with a standard deviation of 1.71. This indicates that there is relatively low variation in board size across the sample. This indicates that there are no notable discrepancies between the largest and smallest boards observed. The largest board size, comprising 11 members, was observed in 2020 and 2021 at Bumi Resources Tbk. This relatively large board size may be indicative of the company's emphasis on incorporating a diverse range of viewpoints in decision-making processes, thereby ensuring a multifaceted approach to governance. In contrast, companies such as SMRU, PKPK, and HITS have maintained boards with only two members consistently from 2018 to 2022. This minimalist governance structure may be indicative of a strategic focus on efficiency and simplicity, with the objective of streamlining decision-making and minimising bureaucratic processes.

3.2. Multiple Linier Regression Analysis

Table 4. Results of T-test and Coefficient of Determination

Variable	Coefficient	t-Statistic	Prob.
C	2.124145	9.626418	0.0000
International Div.	-0.446462	-1.406697	0.1607
Financial Leverage	-0.169217	-2.811262	0.0053
Board of Directors	-0.099608	-0.666870	0.5054

Source: Processed secondary data (2023)

The results of the data processing indicate that the coefficient for the international diversification (ID) variable is -0.446462. The t-statistic for this variable, $-t_{count}$ = -1.406697, is less than the critical t-value, $-t_{table}$ = -1.968855, with a significance level of 0.1607, which is greater than the 0.05 threshold. The results indicate that international diversification does not have a statistically significant impact on firm performance. Although the coefficient indicates a slight negative relationship, the statistical tests confirm that this relationship is not strong enough to be considered significant in the context of this analysis.

In contrast, the coefficient for the financial leverage (FL) variable is -0.169217. The t-statistic for this variable is $-t_{count}$ = -2.811262, which is less than the critical t-value, $-t_{table}$ = -1.968855, with a significance level of 0.0053. This is less than the 0.05 threshold. This suggests that there is a statistically significant relationship between financial leverage and firm performance. In particular, the inverse correlation indicates that as financial leverage rises, firm performance tends to decline. In light of the statistical significance of this relationship, it is imperative to consider financial leverage as a pivotal factor in the analysis of a company's performance.

Nevertheless, the coefficient for the board of directors (BOD) variable is -0.099608, with a t-statistic of -0.666870, which is greater than the critical t-value of -1.968855. The level of statistical significance for this variable is 0.5054, which exceeds the 0.05 threshold. The results indicate that

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the board of directors does not exert a statistically significant influence on firm performance in this analysis. Although the coefficient suggests a slight negative relationship, the statistical tests indicate that this relationship is not sufficiently robust to permit any definitive conclusions to be drawn regarding the influence of board composition on firm performance.

Tabel 5. Results of Determination Coefficient Test

R-squared	0.048195	Mean dependent var	0.930099
Adjusted R-squared	0.037460	S.D. dependent var	1.500170
S.E. of regression	1.471803	Sum squared resid	576.2102
F-statistic	4.489673	Durbin-Watson stat	1.312552
Prob(F-statistic)	0.004296		

Source: Processed secondary data (2023)

Additionally, the table above indicates that the adjusted R-squared value is 0.037460, which implies that the dependent variable (ID) is influenced by the three independent variables (ID, FL, and BOD) by 3.75%. This means that 3.75% of the variations in the dependent variable can be explained by the independent variables included in this research model, while the remaining 96.25% is attributed to other factors that lie outside the scope of this study.

3.3. The Impact of International Diversification on Fim Performance

The results of the t-test for the International Diversification (ID) variable demonstrate that the t-statistic ($-t_{count}$ = -1.406697) is greater than the critical t-value ($-t_{table}$ = -1.968855). Furthermore, the significance value (0.1607) exceeds the 0.05 threshold, indicating that the observed effect is not statistically significant. It can thus be concluded that international diversification does not exert a statistically significant effect on firm performance, which leads to the rejection of the initial hypothesis.

These findings are not consistent with the signalling theory proposed by Spence (1973), which suggests that disclosing pertinent information about a company can assist investors in making more informed investment decisions. In accordance with this theory, international diversification would typically convey a positive signal to investors regarding a company's potential for growth and future performance. However, the findings of this study indicate that international diversification does not appear to function as a signal in this context. Conversely, it appears that investors do not view a company's international expansion as a reliable indicator of enhanced performance, resulting in a decline in firm performance.

Pangestuti et al., (2023)posit that diversification, particularly into international markets, may result in a loss of focus on a company's core business activities, which could have a detrimental impact on performance. This lack of focus may be further compounded by information asymmetry, whereby companies may encounter difficulties in communicating effectively with investors and stakeholders about their international operations. Furthermore, Clarke et al., (2004) posit that companies engaged in international diversification encounter obstacles resulting from information asymmetry. In order to mitigate these challenges, companies may choose to invest in foreign markets in order to reduce uncertainty. However, the level of success achieved through such diversification is often directly proportional to the associated risks of failure.

In the context of Indonesia's energy sector, the dynamics are somewhat distinct. In 2022, energy consumption in Indonesia reached 1.18 billion barrels of oil equivalent (BOE), representing a 28.31% increase from the previous year (Widi, 2023). This is the highest level of energy consumption in Indonesia since 2012. In light of the aforementioned rising demand for energy, it can be posited that Indonesian energy companies may not necessarily require the pursuit of international diversification strategies in order to enhance profitability. Instead, the emphasis should be on enhancing domestic

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operations in order to meet the increasing energy demands within the local market. The complexity and additional risks associated with international diversification may impede the performance of firms, particularly when the primary objective is to meet domestic demand.

The findings of this study are in alignment with those of Pangestuti et al., (2023) which concluded that international diversification does not significantly impact firm performance. This indicates that diversifying operations internationally may not necessarily result in enhanced financial or operational outcomes. These findings challenge the conclusions of several other studies, including those by Agustin & Setiawan (2021), Batsakis et al., (2018), Agustin (2018), and Yen & Lin (2021), which posit that international diversification can enhance firm performance by providing access to new resources and reducing risks. The present study suggests that companies should undertake a rigorous assessment of the extent to which they engage in diversification and avoid overextending themselves. Doing so is crucial to ensure that the focus on core business activities, which have been central to their success, is not compromised.

Furthermore, it is advised that managers implement effective risk management strategies, which entail the periodic assessment and adjustment of their diversification policies. Consequently, companies are better able to navigate the complexities of international expansion while ensuring the continued relevance of their core competencies.

3.4. The Impact of Financial Leverage on Fim Performance

The results of the t-test indicate that the financial leverage (FL) variable has a significant effect on firm performance, with a t-value of -2.811262 and a p-value of 0.0053. These findings provide statistical support for the hypothesis that financial leverage influences firm performance, thereby accepting the second hypothesis.

The results indicate an inverse relationship between financial leverage and firm performance, whereby an increase in financial leverage is associated with a decline in firm performance, and vice versa. This is consistent with the signalling theory proposed by Spence (1973), which suggests that the signals conveyed by a company can influence investor decisions. In accordance with the tenets of signalling theory, a company with a robust financial position and minimal leverage is more likely to attract investors and instil confidence in its prospects. Conversely, the presence of negative signals, such as excessive financial leverage, may give rise to investor concerns, which in turn may have an adverse impact on the company's market perception and performance.

These findings are also consistent with the capital structure theory proposed by Modigliani & Miller (1963), which asserts that a company's performance is influenced by its capital structure. This theory underscores the significance of attaining an equilibrium between debt and equity to ensure financial stability and enhance organizational performance. Basically, The purpose of leverage is to make the profits earned greater than the cost of assets and their sources of funds (Agustia & Suryani, 2018). However, over-reliance on debt in a company's capital structure can adversely affect its financial performance. An excessive debt burden increases a company's risk exposure, which can potentially result in a decline in financial flexibility and operational efficiency (Ningsih & Utami, 2020).

Moreover, Ekadjaja et al., (2021) discovered that elevated levels of leverage can intensify a company's financial burden, thereby impairing its performance. The necessity to fulfil debt repayment obligations can result in a reduction of cash flow, thereby limiting the company's capacity to reinvest in its operations or capitalise on growth opportunities. Similarly, (Pangestuti et al., 2023) posit that companies with high financial leverage may encounter difficulties in repaying loans, which can further exacerbate their financial challenges and impede overall performance.

In the context of Indonesia's energy sector, companies are facing mounting pressure to reduce their reliance on fossil fuels and align their practices with the government's energy transition

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policies, which are designed to advance sustainability. While these policies are vital for long-term environmental goals, they also impose additional costs on companies, such as investments in renewable energy technologies and compliance with stricter environmental regulations. Such costs may serve to exacerbate the financial strain on companies that already rely heavily on financial leverage, potentially impacting their ability to maintain strong financial performance.

The findings of this study are in alignment with those of previous research conducted by Chen & Chen (2023), Danso et al., (2021), and Yang et al., (2016), which collectively demonstrate the significant impact of financial leverage on firm performance. However, the relationship is not straightforward. For example, Pangestuti et al., (2023) emphasise the complexity of this relationship, noting that the impact of financial leverage on firm performance may vary depending on factors such as industry characteristics, regional economic conditions and research methodologies.

In light of these insights, the study offers several significant implications for managerial practice. Firstly, it is incumbent upon managers to prioritise the control of costs and the improvement of operational efficiency in order to mitigate the financial strain that arises from excessive debt reliance. The implementation of an efficient cost management strategy has the potential to enhance profitability, thereby ensuring that the company has sufficient resources to meet its financial obligations and reinvest in growth. Furthermore, it is imperative that managers maintain a vigilant monitoring of the financial risks associated with high levels of leverage. This necessitates a comprehensive assessment of the company's debt capacity, an understanding of the potential risks associated with over-leveraging, and the implementation of strategies to mitigate these risks. In order to safeguard firm performance, it is of paramount importance for managers to adopt proactive financial risk management practices that strike a balance between debt usage and operational and financial stability.

3.5. The Impact of Board of Directors on Fim Performance

The results of the t-test indicate that the variable representing the board of directors (BOD) does not exert a statistically significant effect on the performance of the firm. The t-count value of -0.666870 is greater than the critical value of -1.968855, and the significance value of 0.5054 exceeds the alpha level of 0.05. In light of the aforementioned evidence, the third hypothesis is thus rejected, as there is no evidence to suggest that the board of directors impacts firm performance.

These findings are inconsistent with the tenets of agency theory, as proposed by Jensen & Meckling (1976). According to this theory, conflicts of interest between principals (such as shareholders) and agents (such as managers or directors) may lead to inefficiencies and negatively affect firm performance. The tenets of agency theory posit that the actions of boards of directors should be guided by the principles of integrity and alignment of interests with those of shareholders. This is to ensure that the trust and expectations of all stakeholders are not undermined. However, the results of this study indicate that the composition of the board, as measured by its size, does not have a direct impact on company performance.

Moreover, the results challenge the tenets Spence (1973) signalling theory, which posits that specific signals, such as a robust board, can positively influence investors' perceptions and enhance firm performance. In contrast, the findings of this study indicate that the size of the board of directors does not have a significant impact on performance. This may be attributed to the observation that an increase in the size of the board does not necessarily result in enhanced decision-making processes or superior managerial performance. In certain instances, an extensive board may result in inefficiencies, impede the promptness of decision-making, or engender conflicts of interest, which could ultimately negate the prospective advantages associated with a larger board.

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In addition to the size of the board of directors, other factors related to the composition of the board may play a crucial role in influencing the performance of the firm. To illustrate, the qualifications and characteristics of board members, such as their age, experience, and expertise, can exert a considerable influence on a company's success. Yadnyapawita & Dewi (2020), posit that the mere size of the board should not be regarded as a positive signal to investors. Similarly, the age and educational background of board members can exert an influence on the strategic direction of the company. For example, younger board members may contribute greater motivation, adaptability, and energy to the decision-making process, while those with financial expertise can assist in navigating complex financial environments (Audio & Serly, 2022).

Furthermore, the presence of female directors on the board has been demonstrated to facilitate more effective decision-making and governance. Female directors contribute a diversity of perspectives that is beneficial in addressing complex challenges and developing more comprehensive strategies for the company (Mardiyati, 2017). The inclusion of women on boards of directors has been demonstrated to facilitate more comprehensive problem-solving and to reinforce the company's overall strategic vision.

In the context of Indonesia's energy sector, external factors, such as government policies on energy transition and climate change, exert a more pronounced influence on firm performance than internal factors like board composition. To illustrate, regulations that require the reduction of greenhouse gas emissions and the adoption of renewable energy technologies can have a considerable impact on the operational and financial performance of energy companies. Such external pressures may necessitate adaptations to business models, frequently entailing additional financial investment, which may prove more immediately impactful than changes in board composition.

These findings are consistent with those of previous studies by Yadnyapawita & Dewi (2020), Maryati & Anggraini (2023), and Purnomo et al., (2021), which also found no significant relationship between board composition and firm performance. However, the results of this study differ from those of previous studies by Paramitha (2019), Sari & Ibad (2018), Khan et al., (2019), Taner (2020), and Yan et al., (2021), which found that board characteristics, such as size and diversity, have a significant effect on firm performance.

In light of these disparate findings, it is recommended that managers adopt a nuanced approach when determining the optimal structure of their boards. While the number of directors is a significant factor, other considerations, such as the qualifications of board members, diversity, and the capacity to adapt to dynamic market conditions, should also be taken into account. It is recommended that companies prioritise the qualitative aspects of board composition that align with their strategic goals and foster effective decision-making. This approach will guarantee that the board is adequately prepared to navigate the complexities of a competitive and evolving business environment.

4. CONCLUSION

This study examines the impact of international diversification, financial leverage, and board composition on the performance of energy sector companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022. The findings reveal that international diversification does not significantly affect firm performance, suggesting that energy companies may not gain substantial benefits from international expansion. On the other hand, financial leverage negatively impacts performance, with higher debt levels increasing financial risk, which in turn reduces operational efficiency and profitability. The study also finds that board size does not significantly influence firm performance, indicating that simply expanding the board is not an effective strategy for improving governance or performance.

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The study contributes to existing literature by integrating these variables, which are often studied separately, and providing new insights into the factors influencing performance within the energy sector. It emphasizes the importance of focusing on core operations and maintaining strong financial management practices for long-term growth and stability. For practitioners, the findings suggest that international diversification strategies and financial leverage should be carefully assessed to avoid the risks of excessive debt. Additionally, improving board effectiveness through qualitative improvements in governance, rather than merely increasing board size, is recommended to better support decision-making and leadership. This study is limited in several ways, including the narrow scope of the data set, which encompasses a small sample size and does not fully represent the entire population. Furthermore, the analytical techniques employed may not have fully considered other variables that could significantly impact the results. Future research should consider additional variables, such as macroeconomic conditions and external factors like government policies and global energy price fluctuations, to further elucidate their impact on firm performance. Addressing these aspects could provide a more comprehensive understanding and aid in developing more effective strategies for enhancing firm performance in the energy sector.

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