



Article Type: Research Paper

Family Ownership as a Moderator Variable on Board, Leverage, and Environmental Performance

Haninun^{1*}, Tri Damayanti¹, Ni Putu Widhia Rahayu², Aminah¹ and Naufal Graisman P³



AFFILIATION:

¹Department of Accounting, Faculty of Economics and Business, Universitas Bandar Lampung, Lampung, Indonesia

²Department of Management, Faculty of Economics and Business, Universitas Bandar Lampung, Lampung, Indonesia

³Master of Management, Universitas Bandar Lampung, Lampung, Indonesia

*CORRESPONDENCE:
haninun@ubl.ac.id

THIS ARTICLE IS AVAILABLE IN:
<http://journal.umy.ac.id/index.php/mb>

DOI: 10.18196/mb.v15i1.21505

CITATION:

Haninun, H., Damayanti, T., Rahayu, N. P. W., Aminah, A., & P., N. G. (2024). Family Ownership as a Moderator Variable on Board, Leverage, and Environmental Performance. *Jurnal Manajemen Bisnis*, 15(1), 135-151.

ARTICLE HISTORY

Received:
30 Jan 2024
Revised:
01 Feb 2024
07 Feb 2024
16 Feb 2024
23 Feb 2024
01 Mar 2024
04 Mar 2024
Accepted:
13 Mar 2024

Abstract

Research Aims: This study aims to examine family-listed companies by determining the effects of leverage, board, and ownership on environmental performance in Indonesia.

Design/Methodology/Approach: A total of 130 family-listed companies were examined using the unbalanced panel method. Board resources diversity also stimulated increased strategic opportunities in deciding the companies plans, regarding the conceptual framework prioritizing dependence theory.

Research Results: The results showed that leverage and board significantly-negatively and significantly-positively impacted environmental performance, respectively. Family ownership also strengthened both impacts and transformed a negative direction into a positive effect. This strengthening was due to the important role of ownership in decision-making processes, such as the impact on external stockholders and costs related to environmental performance considered a non-financial strategic issue.

Theoretical Contribution/Originality: The results obtained contribute to developing the relationship between family ownership, ecological education, expert management board, leverage, and environmental performance in Indonesian family-listed companies, specifically in uncertainty economics. Therefore, future studies should be conducted on family companies in the country, implementing the present experimental outcomes as references.

Practitioners/Policy Implications: This study leads us to the belief in agency theory, where the control of shareholders largely influences management decisions and includes environmental issues. According to family business stakeholder method, the participants are the most influential actors majorly affecting decision-making, including decisions to overcome environmental problems. The large leverage observed also proves that management commonly adopts risk-averse behaviour, showing the ability to generate efficient costs and comply with the shareholder control direction.

Limitations/Implications: The experimental scope was considered limited, as a detailed case account was not provided due to the inability to track environmental performance levels. Since multiple experimental aspects required subsequent evaluation, the knowledge prioritizing the thinking patterns of management and controlling shareholders about environmental issues was highly recommended.

Keywords: Environmental Performance; Environmental Board; Leverage; Family Ownership

Introduction

Voluntary and non-financial environmental issues are highly important for various companies due to influencing management strategies. External stockholders commonly portrayed these issues as the image and/or legitimacy related to financial consequences, such as the Cost of Environmental Rules Violation, including pollution, hazes, diseases, etc (Qintharah, 2024). According to Li and Li (2020), higher environmental performance established lower operating costs, with more access to several resources increasing customers and employees interest (Damayanti et al., 2020). In regulating the operations of several companies, the Indonesian Ministry of Environment (KLH) issued the PROPER (Pollution and Environmental Damage Control) assessment program for the controllers of companies and activities, ensuring effective management of environmental pollution, damage, and hazardous waste materials (KLH, 2014). This program consists of various elements, including (1) performance summary document, (2) environmental management system, (3) energy efficiency, 3R (Reduce, Reuse, Recycle) of B3 (hazardous and toxic materials) Waste, (4) 3R Non-Solid B3 Waste, (5) Emission Reduction Water Efficiency, (6) Biodiversity Community Empowerment (KLH, 2014).

PROPER (KLH, 2014) proved that the outcomes prioritizing the assessment of various companies were often issued and scored using a specific system, where 1, 2, 3, 4, and 5 were represented by Black (worst environmental performance), Red, Blue, Green, and Gold (best environmental performance) colours, respectively. Firstly, the black score focused on the companies intentional negligence causing pollution, environmental damage, and violation of the administrative sanction regulations. Secondly, the red score showed that environmental management efforts did not meet the regulation requirements. Thirdly, the blue value prioritized the organizational administrative effort through appropriate legislative standards. Fourthly, the green value proved that several companies highly conducted environmental management beyond compliance, through effective and adequate implementation of relevant systems, resources, and societal empowerment efforts. Fifthly, the gold score focused on organizational consistency, regarding environmental excellence shown in the production and service process, as well as performance of an ethical and responsible business to society.

In Indonesia, family-listed companies are approximately 51%, contributing around 25% of GDP. This contribution prioritizes the financial and non-financial impact of family companies on GDP. The management is also commonly contacted by family ownership, to modify relevant decisions toward controlling the objectives of the shareholders. Based on ownership, many previous studies stated that the Indonesian family business had the most pyramidal-concentrated form (La Porta et al., 1999). In Claessens et al. (2000), the country also had the highest pyramidal ownership at approximately 67%.

Gallizo et al. (2017) proved that the controlling family significantly influenced the selected agendas balancing socio-emotional and economic objectives. In this analysis, environmental issues and strategies focused on implementing and adjusting legal requirements and pollution controls. Environmental strategy was also a management decision coordinated by controlling shareholders, through administrative entrenchment.

Therefore, board responsibility for environmental performance depended on the shareholder direction, addressing the issues through several actions. Sharma (2000) also argued that the management of family-listed companies prioritized environmental strategies, to avoid legal sanctions and establish an image reputation for relevant stockholders.

Since family business is dominant among companies in Indonesia, the work of board characteristics needs to be understood. These characteristics include (1) the establishment of strong coalitions through the administrative households influenced by family visions, and (2) the provision of several environmental responsibility considerations through relevant expertise in board structure. Several previous reports showed a significant relationship between leverage, ownership, and board, toward affecting environmental performance (Gallizo et al., 2017; Block & Wagner, 2014). These reports simultaneously influenced Sharma, (2000), with Freeman (2010) not observing a relationship between every variable.

Various studies showed different outcomes, such as the analyses examining the educational background related to environmental expertise. These analyses included Sharma and Vredenburg (1998), where relevant organizational expertise significantly contributed to the improvement of environmental performance. The importance of effective management was subsequently prioritized in enhancing the performance of various companies. However, other reports proved that organizational expertise disrupted environmental performance, including Yona (2018), where companies competencies did not significantly affect employee efficiency. Another study stated that debt impacted environmental performance, such as Gangi et al. (2021), where higher environmental performance reduced organizational liability costs. Lorentina (2022) and Paramita and Putri (2020) also proved that debt policy disrupted financial performance.

Several reports examining the effects of environmental performance on family ownership also explained that household possession positively affected organizational ecological efficiency (Srivastava & Bhatia, 2020). However, Zientara (2017) suggested that family companies were not necessarily more responsible for environment than non-family enterprises, using an agency theory perspective through a socioemotional wealth method. This result was in line with Poncowati and Supatmi (2021), where higher family ownership significantly increased the negative relationship between social responsibility and earnings management. In the context, the proposed ownership was considered a disruption to environmental performance. Therefore, this study aims to examine family-listed companies by determining the effects of leverage, board, and ownership on environmental performance in Indonesia. The responsibilities of controlling shareholders within family-listed companies are also assessed and evaluated.

Literature Review and Hypotheses Development

Agency theory

Agency theory is the explanation of disparities between the interests of agents and principals (Jensen & Meckling, 2019). This shows that agency issues often occur from conflicts between agents and principals, with modern organizational disruption exceeding relevant previous battles (Ramsbotham et. al, 2011). In the context, distributed ownership commonly presents a more significant problem than concentrated possession. According to Sari et al. (2022), the presence of distributed ownership led to the formation of different interests among different organizational parties. This was not in line with the concept of concentrated ownership, where a scarcity of shareholder interests was prioritized. Distributed ownership also enabled the possession of a tiny fraction of shares, such as 1% or less, causing the deprivation of voting privileges during the general shareholders meeting. Furthermore, Sari et al. (2022) protected minority shareholders in a concentrated ownership system, where voting rights were slightly significant. The concentration of ownership within a single corporation also frequently led to conflicts between several divisions, prioritizing a phenomenon known as the second agency problem. This secondary conflict focused on the disruption between majority and minority agents, compared to agent-principal issues. The conflict also increased the possibility of expropriation by dominant shareholders, leading to the disruption of minority agents (Sari et al., 2022).

In Ang et al., (2000), agency costs were considerably higher due to external management, with a manager or specific family owning more than 50% of the organizational shares. Riniwati (2016) also proved the existence of agency difficulties, with the presence of an administrative family member reducing conflicts between the owner and management. This conflict reduction was due to the establishment of decisions and control by similar household agents. Therefore, the costs associated with decision monitoring and supervision were minimized.

Stakeholder Theory

Freeman (2010) stated that the primary objectives of various companies were commonly initiated to maximize profits and ensure appropriate satisfaction for stockholders. This led to the implementation of the stakeholder theory, where companies focused on strategic decisions and prioritized the interests of many shareholders, such as employees, customers, media, and regulatory agencies (Santoso et. Al, 2021). Figure 1 shows the main power of stockholders in family business framework.

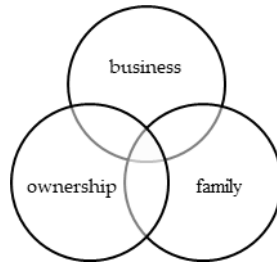


Figure 1 3-Circle Model of Tagiuri and Davis (1982)

Source: (Carlock & Ward, 2001)

In Figure 1, family and ownership were the main powers influencing management decisions in household business. Based on the set of stakeholder theory, the ability of companies to make generally beneficial decisions highly depended on the following, (1) ownership structure strength, (2) the nature of the structural relationships with internal and external stockholders, such as employees, government regulations, society, environmentalists, suppliers, customers, banks, etc. Mitchell et al., (2011) also proved that family companies often included every household member, to determine the influential stockholders. These methods produced different outcomes than non-family business settings, with the power, legitimacy, and significance of shareholders having great effects.

Educational Background/Environmental-Expertise Board Management

Environmental expertise is integrated into a comprehensive understanding prioritizing local to global scales, by largely focusing on natural science in various fields (Sörlin, 2013). According to Juliantina et al. (2017), the expertise was a science analyzing curative and preventive actions toward environmental protection, including water, land, air, and public health. Sörlin (2013) also focused on predicting the present and future rate and direction of changes in global environmental conditions, increasingly assuming that the ecological transformations were largely caused by man.

Debt

Prihadi (2019) stated that debt was a financial obligation prioritizing short or long-term repayment within a specific period. Fernández-Cuesta et al. (2018) also proved that total debt was observed in current and long-term liabilities, with (Shaukat & Trojanowski, 2018) focusing on the provision of additional supervision to companies having higher debt-to-total equity ratios. These companies were highly motivated and effective in contributing to increased organizational performance and value.

Environmental Performance

Hart and Milne (2003) stated that environmental performance measurement was the measurement, comparison, and provision of organizational success information, to implement sustainability principles and achieve ecosystem goals. (Soedjatmiko et al.,

2021) also proved that environmental performance was a significant effort responsible for the establishment of a good ecosystem. In this context, the organizational performance established environmentally friendly practices, as well as restored environment and ecological conservation (Bukit, 2018). Furthermore, Reliantoro (2012) stated that the government developed a platform through the Ministry of environment, to measure environmental performance and assess the appropriateness of industrial operations for the ecosystem. This assessment was carried out through a rating program known as PROPER (Companies Performance Rating Assessment Program in Environmental Management). The rating program was commonly implemented to measure environmental performance, using several colours such as gold, green, blue, red, and black. In this case, the outcomes obtained were often publicly announced regularly, enabling the determination of organizational environmental management levels through the existing colours (Wimatsari, 2009).

Family Ownership

Villalonga et al. (2015) proved that three basic elements were observed in the definition of family-listed companies, namely ownership, control, and management. This was in line with (Means, 2017), where ownership concentration was expected to positively impact organizational value due to reducing conflicts of interest between owners and managers. Meanwhile, Park (2021) argued that ownership concentration was observed because of the profit-maximizing decisions provided by current and prospective shareholders, leading to no significant effect on organizational value. Family companies also possessed significant potential to address various companies environmental problems (Sharma & Sharma, 2011). This perspective showed that family companies had different behaviours than non-family enterprises because household ownership designed and mandated a business vision (Dal Maso, 2019).

The achievement of environmental performance was difficult because of inadequate information and resources in board structures (De Villiers et al., 2011). This difficulty in determining the strategies for product stewardship, pollution prevention, and sustainable development stimulates various companies toward uncomfortable environmental performance. In the context, the difficult stimulation focuses on the need to adopt new societal expectations and the inadequate response of resource-lacking managers. Therefore, the networks of individual directors support the quick response to strategic issues, which is related to many institutional regulations. The relationships are also complex and should adjust to the recent global situations. In this case, more opportunities to learn about environmentally efficient production technology and relevant implementation costs are elevated with the highly complex directors networks and experiences (Homroy & Slechten, 2019). Based on Gunawan (2021), directors with legal backgrounds were more advantaged due to the higher costs of environmental legal consequences. This proved that the board with law experts carefully monitored environmental practices and established better performance.

In Riniwati (2016), board of directors' decision-making was initially tasked with monitoring and advising senior management. This showed that environmental experienced director

was capable of bridging the information gap between agents and principals (Salancik, 1978). Laux and Laux (2009) also recommended the expertise of directors prioritizing environmental performance, to provide appropriate support for works related to ecological strategies. Based on the explanations, the following statement is formulated.

H₁: Educational background/environmental-expertise board management positively affects environmental performance.

According to stakeholder theory, shareholders were the individuals, groups, or companies authorized to influence organizational decisions (Freeman, 2010). This explained that the most important stakeholder in household business should prioritize family, ownership, and organizational environment (government regulation) toward the consideration of companies interests (Tagiuri & Davis, 1996). In the context, government rules often played important roles in being followed by legal companies within the country. Therefore, an appropriate organizational arrangement was required due to the existence of government rules on environmental issues. The consequences of violating the rules were also commonly economic, such as issuing a fine that should be presently or futuristically paid, leading to more expensive budgeting in various companies financing.

The knowledge of future expenses is facilitated by significantly prioritizing debt. This proves that companies presently managing high-budget expenditures are unable to increase costs in subsequent periods, due to environmental rules violation. Therefore, companies logically prefer obedience of appropriate standards because of the implemented economic consequences and managers averse behaviours, leading to the formulation of the following statement.

H₂: Debt negatively influences environmental performance.

Based on Claessens et al. (2000) and Lemmon and Lins (2003), the entrenchment of controlling shareholders occurred in the developing countries within East Asia, during the crisis period. This entrenchment strategy allowed the personal enrichment of shareholders due to organizational management and decision-makers. Management policies prioritizing environmental regulations are also capable of establishing several advantages stimulating personal interests. Furthermore, the entrenchment strategy is a controlling interest in the long-term viability of various companies, focusing on family and organizational reputation through management monitoring. This was supported by Block and Wagner (2014), where family participation in ownership positively impacted CSR performance, including environmental performance (Block & Wagner, 2014).

In the stakeholder theory, Freeman (2010) identified the strategic importance of groups and individuals beyond relevant stockholders, such as local community enterprises, environmentalists, consumer advocates, governments, special interest factions, and legitimate business actors (competitors and media). According to the type II framework of agency theory, family ownership motivated management to direct companies toward

reduced costs, specifically in enterprises associated with environmental issues. Family was also considered the most important stakeholder in the household business method.

Several previous reports, such as Cordeiro et al. (2021), analyzed family ownership as a moderating variable strengthening and weakening the stock market reactions to environmental performance of new companies in dirty and higher-advertising industries, respectively. This analysis was accompanied by the evaluation of ownership as a moderating variable strengthening the stock market reactions to new companies environmental performance in higher competitive and information opacity enterprises. However, no analysis was observed for variable toward becoming a moderator between expertise background, debt, and performance, leading to the formulation of the following statements.

H_{3a}: Family ownership moderates board environmental-related-education background on environmental performance.

H_{3b}: Family ownership moderates debt on environmental performance.

Research Methods

The experimental process was initiated by acquiring the PROPER report from the Indonesian Ministry of Environment (KLH), providing a comprehensive overview of the country environmental achievements. This was accompanied by the thorough assessment of the financial and annual reports of family-listed companies available on the website of the Indonesia Stock Exchange (IDX; idx.co.id). A comparative data analysis was also conducted from 2014 to 2016 between KLH and IDX. In the context, a total of 55 family-listed companies with openly shared information on environmental performance were observed for KLH. All the necessary experimental data were subsequently inputted, with "PROPER" analyzed by calculating the average score for each enterprise. Furthermore, KLH assessed environmental performance of companies by implementing various colours to represent relevant responsibility levels. This was accompanied by the determination of scores through experimental reasoning, which prioritized the colours of the PROPER report. For example, Gold, Green, Blue, Red, and Black were scored as 5, 4, 3, 2, and 1, respectively. In 2014, both the Tangerang and Siak facilities of Indah Kiat Pulp and Paper, Tbk (INKP), were awarded a rating of 3. This rating was accomplished by calculating the sum of the Tangerang and Siak scores and dividing the outcome by 2, leading to the acquisition of the accurate data value for INKP (3).

Family board was the percentage of household participation in management, such as CEO and directors. Based on Damayanti et al. (2018), the number of family members holding managerial positions was tallied by mining companies websites, annual reports, and FORBES magazines. Board was also obtained with an educational background related to environmental issues, namely law, engineering, or duty expertise and experiences, such as (1) recycling waste methods, (2) manufacturing hazardous waste disposal, (3) filtering

air from production activities, and (4) establishing sound-dampening machines to reduce noise pollution in society. In addition, the binary method developed by Homroy and Slechten (2019) was implemented to present the organizational board.

Table 1 Variables Descriptions

Variable	Code	Description	Source
Dependent			
Environmental performance	PROPER	The average score of PROPER achieved by family companies	Proper report KLH
Independent			
Family ownership	OWN	Percentage of ownership occurred by family members	AR, ICMD
Board with education background related to environmental/expertise	ENV	Binary variable, with 1 = the presence of board having an educational background related to environmental issues or possessing any expertise on ecological responsibility, 0 = other	AR
Debt	LEV	Ratio of total debts and assets	FR

FR: Financial Report, ICMD: Indonesia Capital Market Directory, AR: Annual Report, KLH: Ministry of Environment Indonesia.

The conceptual framework is presented in Figure 2.

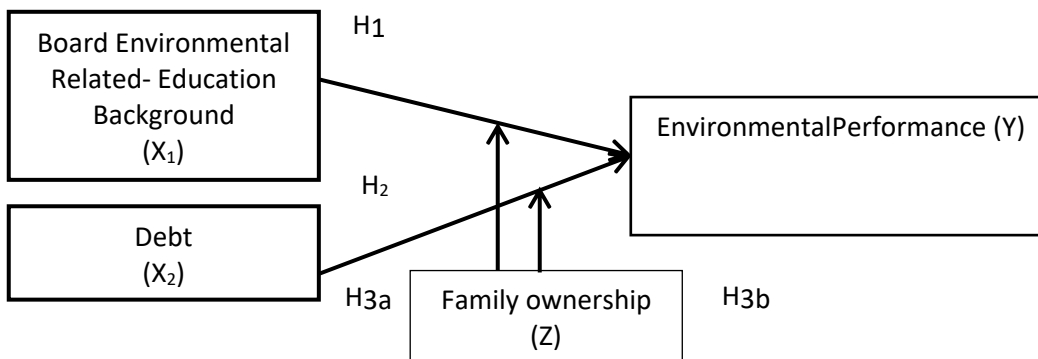


Figure 2 Study Framework

In Figure 2, the implemented conceptual framework was presented, with environmental performance specifically serving as the dependent variable. Meanwhile, the participation level of family members in organizational ownership and operation was the individual variable determining the independent business determinants. For example, leverage and profitability were appropriately implemented as the experimental control determinants. The following equations are used to design the proposed econometric model prioritizing the conceptual framework.

$$Y = \alpha + \beta_1 ENV + \beta_2 LEV + \epsilon$$

$$Y = \alpha + \beta_1 ENV + \beta_2 LEV + \beta_3 OWN + \epsilon$$

$$Y = \alpha + \beta_1 ENV + \beta_3 OWN + \beta_4 ENV \cdot \beta OWN + \epsilon$$

$$Y = \alpha + \beta_2 LEV + \beta_3 OWN + \beta_4 LEV \cdot \beta OWN + \epsilon$$

Results and Discussion

In Table 2, the outcomes of the multivariate regression and descriptive statistics were obtained through the panel data method. This proved that Panel D presented descriptive statistics, with the mean value of environmental performance (PROPER) being 2.910897. The score for PROPER also ranged from 2 to 4, with the average, maximum, and minimum values for family ownership (OWN) being 54.12%, 97.20%, and 12.05%, respectively. Moreover, the ENV score representing environmental background or board competence levels was 0.523077. This was accompanied by the maximum and minimum possible scores of 1,000 and 0, respectively. The mean, maximum, and minimum values for leverage (LEV) were also 48.05%, 124.3%, and 6.6%, respectively.

Table 2 Descriptive statistics and multivariate regression using Least Square Panel Data

Panel D				
	PROPER	OWN	ENV	LEV
Mean	2.910897	54.11595	0.523077	48.04977
Median	3.000000	55.53000	1.000000	47.49576
Max	4.000000	97.20000	1.000000	124.2964
Min	2.000000	12.05000	0.000000	6.618702
Std. Dev.	0.385435	20.86754	0.501399	20.62631
Samples	130			

Table 3 Results and Discussion

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob/Sig
1	ENV	,288	,087	3,304	,001
	LEV	-,004	,002	-2,131	,035
	R-squared.	,102	Adjusted R-squared	,088	
	F-statistic.	7,194	Prob(F-statistic)	,001^b	
2	ENV	,216	,085	2,551	,012
	LEV	-,006	,002	-2,958	,004
	OWN	,008	,002	3,877	,000
	R-squared.	,197	Adjusted R-squared	,178	
	F-statistic.	10,336	Prob(F-statistic)	,000^b	
3	ENV	-1,121	,504	-3,327	,028
	OWN	,026	,012	2,162	,034
	ENVOWN	,663	,246	2,908	,008
	R-squared.	,172	Adjusted R-squared	,152	
	F-statistic.	8,720	Prob(F-statistic)	,000^b	
4	LEV	-,040	,012	-3,327	,001
	OWN	,026	,012	2,162	,033
	LEVOWN	,713	,245	2,908	,004
	R-squared.	,186	Adjusted R-squared	,0167	
	F-statistic.	9,592	Prob(F-statistic)	,000^b	

Dependent Variable: PROPER

Based on the multivariate regression in model 1, a positive influence was found between Board Education Background and Environmental Performance, with t-statistic and probability/sig level values of 3.304 and 0.001, respectively. This proved that a higher Board Education Background increased ecosystem damage attention and improved

environmental performance. The results also showed that Leverage disrupted Environmental Performance, with t-statistic and probability/sig level values of -2.131 and 0.035, respectively. In the context, higher leverage decreased ecosystem damage attention and reduced environmental performance.

In model 2, a test was conducted to determine the status of family ownership as an independent variable. This test showed that ownership significantly and strongly affected environmental performance, with t-statistic and probability level values of 3.877 and 0.000, respectively. In the context, family ownership significantly and strongly focused on relevant business sustainability. Based on Equations 3 and 4, significant interactions were observed between Family Ownership, Board Education Background, and Leverage, statistically strengthening the independent and dependent determinants through a probability value < 0.05 . This result was in line with Li and Chan (2015), where ownership type correlated with environmental performance. In the context, small and medium-sized SOEs (State-Owned Enterprises) averagely spent less on pollution reduction technologies. SOEs were also less likely to meet national emissions standards, compared to private and foreign companies, including family ownership. Therefore, ownership was considered a pseudo-moderating variable, which moderated the relationship between an independent and a dependent variable (Solimun, 2011).

According to the results, environmental performance was influenced by family ownership, educational board/ecosystem expertise, and leverage. This logically prioritized the practice of type II agency theory in concentrated ownership, which influenced management decisions. Villalonga et al. (2015) also found that agency problems were resolved in family companies, ranging from the conflicts of interest focusing on major-minor agents and controlling shareholders/parents. Therefore, controlling shareholders were not similar to the relatives coordinating the companies shares or serving as board of directors and managers. Villalonga et al. (2015) also stated that "Family goals often include various details, such as (1) preserving the legacy and reputation, (2) implementing values, mission, and vision, (3) protecting the household name similar to company, (4) maintaining unity and harmony, (5) minimizing conflict, (6) maximizing socio-emotional wealth, (7) preserving the enterprise culture established by the founder, (8) providing employment opportunities for members, (9) helping the community, and (10) protecting environmental objectives when family companies played an important role." Besides possessing partial or every main objective, family shareholders related to a larger group subsequently owned personal achievement. In this case, the personal achievements were likely to conflict with the general family objectives, for example, maximizing financial returns, increasing distributions toward organizational growth limitation, or having liquidity and exit options due to loss of firm control (Villalonga et al., 2015).

The results were logical and in line with Damayanti et al. (2018), where controlling shareholders maximized profits during economic uncertainty periods, specifically for currency crisis instability. This profit maximization was carried out by increasing monetary revenues through ownership in the stock market, for the arrangement of larger family values. Several previous reports were also supportive, such as La Porta et al. (1999), Claessens et al. (2000), Lemmon and Lins (2003), Sanjaya (2010), Sanjaya (2013), and

Haninun and Anggrita (2017). In the reports, the behaviour of controlling shareholders preferred entrenchment in an economic crisis, compared to the incentive effects increasing relevant profits. Moreover, the results supported Chua et al. (1999), where the dominant coalition between family agents and school principals was generationally sustainable, proving that household business participation had several consequences. (Hartoko, 2016) also found that business dysfunction occurred due to negative household participation, through the increasing intensity of conflict degree and persistence, as well as differences in vision and goals. In Hillman and Dalziel (2003), organizational strategies and programs were influenced by director participation, with Eisenhardt (1989) arguing that environmental issues were unpleasant for risk-averse managers. Therefore, payment hesitation prioritizing personal reputation damage was observed, leading to the requirement of principal-controlled investments to obtain higher environmental performance. This situation focused on the difficulties encountered in deciding on environmental strategy when personal gain, risk aversion, and costly activities were not supported. In the context, the roles of family members on board of directors insignificantly and negatively impacted environmental performance.

Since controlling and household shareholders were very strong in the concentration ownership mode and type II agency theory, the existence of ecological education and management expertise board did not significantly affect environmental performance. This proved that family ownership was a control variable with no real impact on ecological efficiency, explaining the slight influence of household possession on environmental performance. The entrenchment effect also provided private monetary benefits to controlling shareholders, regarding the significant elevation of relevant utility (Almeida & Wolfenzon, 2006). Based on Sciascia and Mazzola (2008), family participation in ownership and management was highly considered due to influencing business strategy. In this case, the presence of an educational board and ecological expertise did not significantly affect environmental performance.

According to Tagiuri and Davis (1996), family was one of the most influential stockholders controlling the business toward the satisfaction of internal and external agents. Since family power played an important role in relevant organizational decisions, household companies showed that costs disrupted business profits. In this case, a negative and statistically significant relationship was found between debt and environmental performance, as measured by leverage. The results were in line with Nurdiawansyah et al. (2018), where the elevation of leverage reduced organizational image due to environmental regulations avoidance, with controlling shareholders not considering leveraging incentives. Furthermore, the management risk-averse behaviour prioritized the consideration of leverage, with Eisenhardt (1989) stating that managers often avoided risky situations. For example, the opportunity for managerial replacement was avoided when managers decreased costs, produced budgeting efficiency, and obtained shareholders-stockholders satisfactions. This avoidance was because the cost control ability of the managers was considered an incentive. Therefore, environmental performance mainly depended on the direction of controlling shareholders and family, with managers considering organizational progress and incentives as decision-makers in the presence of risk-averse and household coalitions.

The impact of board properties on ecological efficiency was analyzed using the Indonesian non-financial family-listed companies' data in PROPER KLH. These data showed a statistically significant positive relationship between family ownership, ecological education, and board management expertise toward environmental performance. The existence of organizational leverage also significantly influenced environmental performance. Moreover, several effects on external stockholders and costs were also related to ecological efficiency, which was a non-financial strategic issue. These results proved that agency theory played an important role in family companies, where controlling shareholders largely affected management decisions and included environmental issues. In family business stakeholder method, the participants were subsequently the most influential stockholders having administrative decision-making authority. Difficulties were also observed in the direction of management toward considering environmental decision-making during uncertain economic situations and self-motivation of controlling shareholders. Despite the difficulties encountered, the management still highly considered relevant environmental problems. The large leverage observed also proved that the organizational administration was conducting risk-averse behaviour, portraying the ability to generate efficient costs and comply with the direction of the controlling shareholder.

Based on the limitations, the experimental scope was very limited, causing the non-provision of detailed explanations because environmental performance levels were not tracked. Since the analysis of various aspects was required, the knowledge prioritizing the thinking patterns of management and controlling shareholders was very important in environmental issues. The results also proved that family-listed companies should avoid the high implementation of leverage in environmental decision-making due to being considered a burden, specifically in an uncertain economy. In addition, relevant future analyses need to implement the present experimental outcomes as significant reference materials in Indonesia.

Conclusion

In conclusion, the impact of board properties on ecological efficiency was analyzed using the Indonesian non-financial family-listed companies data in PROPER KLH. These data showed a statistically significant positive relationship between family ownership, ecological education, and board management expertise toward environmental performance. The existence of organizational leverage also significantly influenced environmental performance. Moreover, several effects on external stockholders and costs were also related to ecological efficiency, which was a non-financial strategic issue.

Based on the results, agency theory played an important role in family companies, where controlling shareholders largely affected management decisions and included environmental issues. In family business stakeholder method, the participants were subsequently the most influential stockholders having administrative decision-making authority. Difficulties were also observed in the direction of management toward considering environmental decision-making during uncertain economic situations and

self-motivation of controlling shareholders. Despite the difficulties encountered, the management still highly considered relevant environmental problems. The large leverage observed also proved that the organizational administration was conducting risk-averse behaviour, portraying the ability to generate efficient costs and comply with the direction of the controlling shareholder.

The limitations showed that the experimental scope was very limited, causing the non-provision of detailed explanations because environmental performance levels were not tracked. Since the analysis of various aspects was required, the knowledge prioritizing the thinking patterns of management and controlling shareholders was very important in environmental issues. The results also proved that family-listed companies should avoid the high implementation of leverage in environmental decision-making due to being considered a burden, specifically in an uncertain economy. In addition, relevant future analyses need to implement the present experimental outcomes as significant reference materials in Indonesia.

References

- Almeida, H. V., & Wolfenzon, D. (2006). A Theory of Pyramidal Ownership and Family Business Groups. *The Journal of Finance*, 61(6), 2637–2680. <https://doi.org/10.1111/j.1540-6261.2006.01001.x>
- Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *The Journal of Finance*, 55(1), 81–106.
- Block, J. H., & Wagner, M. (2014). The effect of family ownership on different dimensions of corporate social responsibility: Evidence from large US firms. *Business Strategy and the Environment*, 23(7), 475–492. <https://doi.org/10.1002/bse.1798>
- Bukit, R. B. (2018). Environmental Performance, Profitability, Asset Utilization, Debt Monitoring and Firm Value. *International Conference on Agriculture, Environment, and Food Security*, 122, 012137, 1-6. <https://doi.org/10.1088/1755-1315/122/1/012137>
- Carlock, R. S., & Ward, J. L. (2001). *Strategic Planning for the Family Business*. Palgrave Macmillan UK. <https://doi.org/10.1057/9780230508750>
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19–39. <https://doi.org/10.1177/104225879902300402>
- Claessens, S., Djankov, S., & Lang, L. H. P. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58(1-2), 81–112. [https://doi.org/10.1016/S0304-405X\(00\)00067-2](https://doi.org/10.1016/S0304-405X(00)00067-2)
- Cordeiro, J. J., Profumo, G., & Tutore, I. (2021). Family ownership and stockholder reactions to environmental performance disclosure: A test of secondary agency relationships. *Business Strategy and the Environment*, 30(4), 2091–2107. <https://doi.org/10.1002/bse.2734>
- Dal Maso, L., Basco, R., Bassetti, T., & Lattanzi, N. (2020). Family ownership and environmental performance: The mediation effect of human resource practices. *Business Strategy and the Environment*, 29(3), 1548–1562. <https://doi.org/10.1002/bse.2452>
- Damayanti, T., Haninun, N. A., Lindrianasari, N. A., Aminah, N. A., & Nurdianawansyah, N. A. (2020). Board characteristics and environmental performance in Indonesian family business. *International Journal of Trade and Global Markets*, 13(1), 106. <https://doi.org/10.1504/ijtgm.2020.104919>

- Damayanti, T., Lindrianasari, L., Komalasari, A., Dewi, F. G., & Gamayuni, R. R. (2018). Entrenchment effect and financial performance in Indonesia family listed companies. *Review of Integrative Business and Economics Research*, 7(2), 152–166.
- De Villiers, C., Naiker, V., & van Staden, C. J. (2011). The Effect of Board Characteristics on Firm Environmental Performance. *Journal of Management*, 37(6), 1636–1663. <https://doi.org/10.1177/0149206311411506>
- Eisenhardt, K. M. (1989). Agency Theory: An Assessment and Review. *Academy of Management Review*, 14(1), 57–74. <https://doi.org/10.5465/amr.1989.4279003>
- Fernández-Cuesta, C., Castro, P., Tascón, M. T., & Castaño, F. J. (2019). The effect of environmental performance on financial debt. European evidence. *Journal of Cleaner Production*, 207, 379–390. <https://doi.org/10.1016/j.jclepro.2018.09.239>
- Freeman, R. E. (2010). *Strategic Management*. <https://doi.org/10.1017/cbo9781139192675>
- Gallizo, J. L., Mar-Molinero, C., Moreno, J., & Salvador, M. (2017). Family business and value-added distribution: a socioemotional wealth approach. *Academia Revista Latinoamericana de Administración*, 30(1), 2–22. <https://doi.org/10.1108/arla-05-2015-0099>
- Gangi, F., Mustilli, M., & Varrone, N. (2019). The impact of corporate social responsibility (CSR) knowledge on corporate financial performance: evidence from the European banking industry. *Journal of Knowledge Management*, 23(1), 110–134. <https://doi.org/10.1108/jkm-04-2018-0267>
- Gunawan, R. M. B. (2021). *GRC (Good Governance, Risk Management, And Compliance)*. Rajawali Pers. PT. RajaGrafindo Persada.
- Haninun, & Anggrita, D. (2017). The effect of ownership structure on environmental performance and its implication towards financial performance (an empirical study of companies listed in the Indonesian Stock Exchange). *Science International (Labore)*, 29(2), 509-517.
- Hart, S. L., & Milstein, M. B. (2003). Creating sustainable value. *Academy of Management Perspectives*, 17(2), 56–67. <https://doi.org/10.5465/ame.2003.10025194>
- Hartoko, S. (2016). Konsep dalam Perilaku Organisasi dan Individu Guna Membangun Budaya Organisasi dan Tim Kerja yang Tangguh. *Jamak: Jurnal Administrasi Manajemen dan Kepemimpinan*, 3(1), 70-81.
- Hartoko, S. (2016). Organization Behavior. In *waskita-dharma*. https://doi.org/10.1007/1-4020-7932-x_10
- Hillman, A. J., & Dalziel, T. (2003). Boards of Directors and Firm Performance: Integrating Agency and Resource Dependence Perspectives. *Academy of Management Review*, 28(3), 383–396. <https://doi.org/10.5465/amr.2003.10196729>
- Homroy, S., & Slechten, A. (2017). Do Board Expertise and Networked Boards Affect Environmental Performance? *Journal of Business Ethics*, 158(1), 269–292. <https://doi.org/10.1007/s10551-017-3769-y>
- Jensen, M. C., & Meckling, W. H. (1919). Theory of the firm: Managerial behavior, agency costs, and ownership structure. Gower.
- Juliantina, J., Jamaludin, U., & Legiani, W. (2024). Penerapan Konsep Green School Sebagai Strategi Penguatan Pendidikan Karakter Peduli Lingkungan Pada Siswa. *Jurnal Darma Agung*, 32(2), 564-575. <https://jurnal.darmaagung.ac.id/index.php/jurnaluda/article/view/4064>
- La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate Ownership Around the World. *The Journal of Finance*, 54(2), 471-517. <https://doi.org/10.1111/0022-1082.00115>
- Laux, C., & Laux, V. (2009). Board Committees, CEO Compensation, and Earnings Management. *The Accounting Review*, 84(3), 869–891. <https://doi.org/10.2308/accr.2009.84.3.869>

- Lemmon, M. L., & Lins, K. V. (2003). Ownership Structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis. *The Journal of Finance*, 58(4), 1445–1468. <https://doi.org/10.1111/1540-6261.00573>
- Li, C., & Li, G. (2020). Does environmental regulation reduce China's haze pollution? An empirical analysis based on panel quantile regression. *PLOS ONE*, 15(10), e0240723. <https://doi.org/10.1371/journal.pone.0240723>
- Li, X., & Chan, C. G.-W. (2015). Who Pollutes? Ownership type and environmental performance of Chinese firms. *Journal of Contemporary China*, 25(98), 248–263. <https://doi.org/10.1080/10670564.2015.1075718>
- Lorentina, V. (2022). Pengaruh Kinerja Lingkungan, Pertumbuhan Penjualan, Ukuran Perusahaan, dan Kebijakan Hutang terhadap Kinerja Keuangan pada Perusahaan Sektor Industri Barang Konsumsi di Bursa Efek Indonesia. *Fin-Acc Financial Accounting*, 7(7), 1089-1100. <https://journal.widyadharma.ac.id/index.php/finacc/article/view/3966>
- Means, G. (2017). *The modern corporation and private property*. Routledge.
- Mitchell, R. K., Agle, B. R., Chrisman, J. J., & Spence, L. J. (2011). Toward a Theory of Stakeholder Salience in Family Firms. *Business Ethics Quarterly*, 21(2), 235–255. <http://www.jstor.org/stable/41304428>
- Nurdiawansyah, Lindrianasari, & Komalasari, A. (2018). Carbon Emission Issues in Indonesia. *Review of Integrative Business and Economics Research*, 7(3), 20-33. http://buscompress.com/uploads/3/4/9/8/34980536/riber_7-s3_03k18-049_20-33.pdf
- Paramita, P. W. A., & Putri, I. G. A. M. A. D. (2020). Intellectual Capital, Leverage dan Profitabilitas Perusahaan Sub-Sektor Asuransi di Bursa Efek Indonesia. *E-Jurnal Akuntansi*, 30(12), 3110. <https://doi.org/10.24843/eja.2020.v30.i12.p09>
- Park, J. J. (2021). From Managers to Markets: Valuation and Shareholder Wealth Maximization. *Journal of Corporation Law*, 47, 435.
- Poncowati, S. M., & Supatmi, S. (2021). Pengaruh tanggung jawab sosial terhadap manajemen laba dengan kepemilikan keluarga sebagai pemoderasi. *Jurnal Riset Akuntansi & Perpajakan (JRAP)*, 8(1), 92–107.
- Prihadi, T. (2019). *Analisis laporan keuangan*. Gramedia Pustaka Utama.
- Qintharah, Y. N. (2024). *Urgensi Pengungkapan Lingkungan*. CV. Azka Pustaka.
- Ramsbotham, O., Woodhouse, T., & Miall, H. (2011). *Contemporary Conflict Resolution. 3rd Edition*. Polity Press, London.
- Reliantoro, S. (2012). *The Gold for Green*. Kementerian Lingkungan Hidup, Jakarta.
- Riniwati, H. (2016). *Manajemen sumberdaya manusia: Aktivitas utama dan pengembangan SDM*. Universitas Brawijaya Press.
- Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.
- Sanjaya, I. P. S. (2010). *Efek Entrenchment dan Alignment Pada Manajemen Laba (The Effects of Entrenchment and Alignment on Earnings Management)*. Dissertation. Universitas Gadjah Mada.
- Sanjaya, I. P. S. (2013). Family as The Ultimate Ownership Affects Firm Performance. *Sustainable Competitive Advantage (SCA)*, 2(1). <http://jp.feb.unsoed.ac.id/index.php/sca-1/article/view/181>
- Santos, E. B., Marlina, M. A. E., & Laturette, K. (2021). *Tinjauan Tanggung Jawab Sosial Perusahaan: Studi di Filipina*. Deepublish.
- Sari, R. C., & Sholihin, M. (2022). *Etika Bisnis di Era Teknologi Digital*. Yogyakarta: Andi.
- Sciascia, S., & Mazzola, P. (2008). Family Involvement in Ownership and Management: Exploring Nonlinear Effects on Performance. *Family Business Review*, 21(4), 331–345. <https://doi.org/10.1177/08944865080210040105>

- Sharma, P., & Sharma, S. (2011). Drivers of Proactive Environmental Strategy in Family Firms. *Business Ethics Quarterly*, 21(2), 309–334. <https://doi.org/10.5840/beq201121218>
- Sharma, S. (2000). Managerial Interpretations and Organizational Context as Predictors of Corporate Choice of Environmental Strategy. *Academy of Management Journal*, 43(4), 681–697. <https://doi.org/10.5465/1556361>
- Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal*, 19(8), 729–753. [https://doi.org/10.1002/\(sici\)1097-0266\(199808\)19:8<729::aid-smj967>3.3.co;2-w](https://doi.org/10.1002/(sici)1097-0266(199808)19:8<729::aid-smj967>3.3.co;2-w)
- Shaukat, A., & Trojanowski, G. (2018). Board governance and corporate performance. *Journal of Business Finance & Accounting*, 45(1–2), 184–208.
- Soedjatmiko, S., Tjahjadi, B., & Soewarno, N. (2021). Do Environmental Performance and Environmental Management Have a Direct Effect on Firm Value? *The Journal of Asian Finance, Economics and Business*, 8(1), 687–696. <https://doi.org/10.13106/jafeb.2021.vol8.no1.687>
- Solimun. (2011). *Analisis Variabel Moderasi dan Mediasi*. Universitas Brawijaya. Malang.
- Sörlin, S. (2013). Reconfiguring environmental expertise. *Environmental Science & Policy*, 28, 14–24. <https://doi.org/10.1016/j.envsci.2012.11.006>
- Srivastava, A., & Bhatia, S. (2020). Influence of Family Ownership and Governance on Performance: Evidence from India. *Global Business Review*, 23(5), 1135–1153. <https://doi.org/10.1177/0972150919880711>
- Tagiuri, R., & Davis, J. (1996). Bivalent Attributes of the Family Firm. *Family Business Review*, 9(2), 199–208. <https://doi.org/10.1111/j.1741-6248.1996.00199.x>
- Villalonga, B., Amit, R., Trujillo, M.-A., & Guzmán, A. (2015). Governance of Family Firms. *Annual Review of Financial Economics*, 7(1), 635–654. <https://doi.org/10.1146/annurev-financial-110613-034357>
- Wimatsari, K. K. (2014). Pengaruh Kinerja Lingkungan Terhadap Corporate Social Responsibility (CSR Disclosure) dan Kinerja Finansial Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi dan Bisnis*, 14(1). <https://doi.org/10.20961/jab.v14i1.154>
- Yona, M. (2018). Pengaruh Penempatan Kerja, Keahlian (Skill) Dan Kepuasan Kerja Terhadap Peningkatan Kinerja Karyawan Pada PT. Osi Electronics Batam. *Jurnal Bening*, 5(1), 27–38. <https://doi.org/10.33373/bening.v5i1.1249>
- Zientara, P. (2017). Socioemotional wealth and corporate social responsibility: A critical analysis. *Journal of Business Ethics*, 144, 185–199. <https://doi.org/10.1007/s10551-015-2848-1>