

Original Article

Tax Efficiency and Capital Structure Dynamics in Family Firms: Impact On Dividend Payouts

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Abstract: *This study investigates the role that tax efficiency, capital structure dynamics and dividend payout policies play in a context of emerging market manufacturing firms while assessing family ownership as an instrumental moderator. Based on agency and pecking order theories, the study deals with restrictiveness of financial leverage and tax manipulation within family-owned corporate contexts. The empirical model uses multiple linear regression and Moderated Regression Analysis (MRA) with robust error adjustment on panel data among 93 manufacturing firms listed in the Indonesia Stock Exchange (IDX), for the period of 2022-2024, producing a total number of firm-year observations equal to 270. The results show that Effective Tax Rate (ETR) is not statistically significant, exerting a negative impact, which suggests that long-term debt liabilities do place limitations on dividends paid. In addition to this, family ownership does not moderate either tax efficiency-dividend links or capital structure-dividends relationships. This evidence supports the argument that dividend policies in emerging manufacturing sectors are driven more by aspirations to service debt than maximize tax efficiency, or preserve socioemotional wealth. This study provides crucial ramifications for corporate managers and investors, emphasizing that financial leverage management serves as the critical determinant of shareholder returns in family-influenced emerging markets.*

Keywords: Dividend Policy, Family Business, Leverage, Tax Management.

I. INTRODUCTION

In recent years, global economic conditions have been volatile, from the COVID-19 pandemic to various political and geopolitical shocks, repeatedly destabilizing corporate cash flows and eroding investor confidence [1]. In this environment, dividend policy is one of the most visible signals investors use to assess a firm's resilience to such volatility, as a company's ability and willingness to continue paying dividends during troubled periods is generally taken as a sign of financial strength [2]. This trend is also confirmed by worldwide dividend statistics: total dividend payments rose steadily from USD 1.26 trillion in 2020 to USD 1.75 trillion in 2024, while the year-on-year growth rate slowed from 16.7% in 2021 to only 5.2% in 2024. The scenario is consistent with the deceleration of global economic growth observed also by the IMF (2023), from about 3.5% in 2022 to around 2.9% in 2024.

A similar trend can be seen in the manufacturing sector in Indonesia. The average dividend payout ratio fell significantly by 13.52% in 2021, recovered slightly around the period of April to June with a growth rate of only 0.79%; however, it weakened again until the end of December due to free cash flow (Bloomberg Database, 2026). This pattern suggests that the economic policies of Indonesian manufacturing firms with regard to dividends are influenced by global macroeconomic dynamics and also established according to internal financial policy decisions, where tax efficiency (TE) and capital structure (CS) can be considered as two important effects.

In essence, dividend policy is described as an agency problem whereby managers agents and shareholders principals have diverging interests regarding what to do with free cash flows Jensen and Meckling, 1976. In theory, tax efficiency the legal minimization of tax obligations to protect net income [3] can increase the pool of profits available for distribution. However, because managers have discretion over the resulting cash flow, the benefits of tax savings do not necessarily get passed on to shareholders in the form of dividends. Rather, such savings could be held internally or used opportunistically [4]. The second external monitoring mechanism is capital structure proxied by the Debt to Equity Ratio (DER). This is because creditors make firms settle debts before paying dividends, especially when the leverage is high [5]. Family ownership is assumed to alter both of these relationships through more internal monitoring: family shareholders tend to have a large share of the equity and hold managerial or board positions and are assumed to monitor managerial behavior more closely to protect long-term reputational capital [6], [7].

Empirical evidence on these associations, however, remains inconclusive. Numerous studies find that tax avoidance or efficiency increased dividends [8]; some conclude the opposite, and others even found no significant effect at all [9, 10].



Likewise, capital structure has been described as negatively related to dividend policy (Aca et al., 2020), positively associated (Silen & Lusmeida, 2025) or not significantly linked at all (Enow, 2023). Family ownership has likewise been connected both to a higher frequency of dividend distributions (Ayu & Viverita, 2020) and to reduced payout ratios (Atmaja, 2017). These conflicting outcomes, together with the lack of research that simultaneously investigates tax efficiency, capital structure, and family ownership within Indonesian manufacturing firms during the 2022–2024 period, provide the rationale for the present study.

Building on this background, we want to answer four questions: Does tax efficiency affect dividend policy? Does capital structure affect dividend policy? Does family ownership change how tax efficiency affects dividend policy? Does family ownership change how capital structure affects dividend policy in manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2022 to 2024? The results of this study will help investors understand how much a company can pay in dividends beyond looking at taxes. They will also support managers in balancing tax planning, borrowing strategies and payout decisions. Additionally, this study will add to what we know about agency theory in family-controlled companies in emerging markets. The study focuses on manufacturing companies listed on the IDX from 2022 to 2024. This will give us insights into how family ownership affects dividend policy in these companies.

II. LITERATURE REVIEW

A) Theoretical Foundation

Agency theory posits that corporate structures are inherently shaped by contractual relationships between principals shareholders and agents managers delegated with decision-making authority [11]. In dispersed ownership environments, agency conflict primarily manifests as Type I conflicts principal-agent, where self-interested managers prioritize perquisites, empire-building, or excess cash retention over shareholder wealth maximization. To curb such managerial opportunism, external governance and monitoring mechanisms- such as dividend payouts, debt covenants from creditors, and concentrated ownership- are deployed to drain free cash flow [12].

Whereas Type I agency problems agent-principal are more significant for mature capital markets with dispersed ownership, in emerging economies like Indonesia, strong family control pervades the corporate landscape, thereby shifting attention to principal-principal conflicts Type II conflict [13]. Although tax-efficiency innovations create higher internal cash flow, managerial discretion or controlling family block holders may retain these cash savings instead of distributing them as dividends [14]. Thus, with tax efficiency within the capital structure and family block holders combined, it comes together to analyze where free cash flows are diverted whether made available for minority shareholders or kept internally.

In addition to agency theory, the study integrates socioemotional wealth (SEW) theory [15] for a deeper understanding of family-controlled enterprises. SEW theory states that family block holders may be driven by both financial and non-financial dimensions (e.g., family reputation, firm control, generational continuity). Reputation, tight control and passing the baton from one generation to another. Motivated by reputational protection, family owners often convert cash savings from tax planning into dividends to resolve principal-principal conflicts with minority investors. However, it is a unifying force, if under extreme pressure on account of the capital structure. When the firm faces high leverage, family owners focus on servicing their debt and retaining cash internally to protect the firm from default, bankruptcy or creditor intervention by severely reducing dividend distributions.

B) Tax Efficiency and Dividend Policy

Dividend policy is the decisions firms make to distribute net earnings between dividends paid out and retained for reinvestment objectives governed by Indonesia through Law No. 40 of 2007 on Limited Liability Companies the Company Law and IDX regulations [16]. Regular dividend payments are a credible signal of sugar content and earnings quality at low cost [17], [18].

Tax efficiency includes legitimate tax-planning activities leveraging fiscal incentives, depreciation choices and deductible expense alignments under Law No.7 of 2021 about the Harmonization Tax Regulation (UU HPP) to maximize values for corporate tax [3]. From an economic standpoint, proper tax planning preserves cash flows and post-tax profitability [6], thereby increasing the pool of distributable profits. In the agency framework, paying out those cash surpluses generated from taxation as dividends lowers managerial incentives to divert funds [20]. Kuswanto (2023) empirically validated this, showing that tax efficiency translates into higher net income and greater dividend payments in Indonesian-listed public companies. Hence, the following hypothesis is proposed:

H1: Tax efficiency has a positive effect on dividend policy

C) Capital Structure Dynamics and Dividend Policy

The capital structure derives its meaning from the values of external debt and equity financing as commonly used to finance business operations and strategic expansion [21]. Although debt financing generates a tax shield, highly leveraged positions have strict contractual (interest and principal repayment) obligations vs. free cash available for equity dividends [22].

Debt serves as an external governance constraint imposed by third-party creditors in agency theory. Debt covenants are imposed by lenders to monitor management behavior and restrict cash flows available for discretionary activities such as dividend payout, in order to ensure debt repayment capacity [23]. As a result, increased financial leverage limits the ability of firms to pay dividends without facing default risk. It simply means that empirical evidence by Ahmed Ishaku et al (2020) proved dividend payouts of listed corporate entities in Indonesia to be negatively affected by leverage constraints. Hence, we propose the following second hypothesis:

H2: Capital structure has a negative effect on dividend policy

D) The Moderating Role of Family Ownership

Family firms are characterized by significant shareholding concentration (usually $\geq 10\%$ voting rights) and active family involvement in executive management or supervisory board [6]. Institutional investors also have positive incentives and direct oversight powers to reduce Type I agency conflicts (defined as the disparity in shareholders' interests or preferences when it comes to firm sustainability) [7].

Firms that enjoy cash savings through tax-efficiency regimes benefit from strong family governance, precluding managerial opportunism coupled with the targeting of preserved cash flow toward dividend payments to shareholders as a reward and stability signal [25]. Family firms in Southeast Asian emerging markets have long been found to pay relatively higher dividends than non-family businesses because of effective monitoring of corporate cash flows (Ayu dan Viverita 2020). Thus, family ownership is expected to strengthen the translation of tax savings into shareholder distributions:

H3: Family ownership strengthens the positive effect of tax efficiency on dividend policy.

Conversely, when family firms face elevated leverage risks, socioemotional wealth preservation and the fear of losing firm control become paramount [27]. High financial leverage exposes family owners to default and bankruptcy distress or high debt obligations; family block holders prioritize debt servicing and internal capital retention over dividend distributions to avoid dilution or creditor intervention [20]. Empirical evidence from Laksana et al. (2024) shows that family firms aggressively reduce dividends in the presence of leverage and to meet debt obligations while preserving financial autonomy.

Hence, the final hypothesis is formulated:

H4: Family ownership exacerbates the negative effect of capital structure on dividend policy.

III. RESEARCH METHOD

The population of this study is the Indonesian manufacturing companies listed on the Indonesia Stock Exchange (IDX) and accessible on the Bloomberg database in the period of 2020-2024, totaling 363 firms. The final sample selection was performed through purposive sampling based on two criteria: (1) manufacturing companies listed on the IDX and present in the Bloomberg database between 2022 and 2024, and (2) companies with complete data for all variables under examination in this study. Through the application of this procedure, a final sample of 93 companies was obtained, generating 279 firm-year observations (93 companies $\times$ 3 years).

The Dividend Payout Ratio (DPR) was used to operationalize the dividend policy, which is the dependent variable of this study. DPR is the ratio of total dividends paid to total net income. The independent variables are tax efficiency, measured by the Effective Tax Rate (ETR), which is the ratio of income tax expense to pre-tax income, and capital structure, measured by the Debt to Equity Ratio (DER), which is the ratio of total liabilities to total equity. The moderating variable is family ownership (FO), which is coded 1 if a family member owns at least 10% of the shares and also sits on the board of directors or the board of commissioners, and 0 otherwise. As a control variable, the model includes profitability, measured by the Return on Assets (ROA), which is calculated as the ratio of net income to total assets.

Table 1: Measurement of Variables

	Measurment
DPR	Total devidends/ Total net income
ETR	Income tax expense/ Pre-Tax Income
DER	Total Liabilities / Total Equity
FO	Dummy: 1=Family-owned ($\geq 10\%$ shares + board seat); 0=otherwise
ROA	Net income/ Total Assets

This research uses secondary data quantitatively taken from the financial statements of manufacturing companies listed on the IDX as compiled by Bloomberg. Data were collected using documentation techniques to get DPR, ETR, DER, ROA and family-ownership classifications for each sample firm-year.

The data analysis of this study was performed using IBM SPSS software (version 26). Descriptive statistics were used to describe the minimum, maximum, mean and standard deviation values of each studied variable. Prior to hypothesis testing, classical assumption tests were performed. Normality test was performed using the Kolmogorov–Smirnov test with Monte Carlo significance. Multicollinearity test was performed based on the values of tolerance and Variance Inflation Factor (VIF). Heteroskedasticity test was performed using the Glejser approach. Autocorrelation test was performed using the Durbin Watson statistic.

Initial diagnostic tests revealed the presence of first-order autocorrelation in both preliminary models. To resolve this violation without discarding valid firm-year observations. The Cochrane-Orcutt transformation procedure was applied across both Model 1 and Model 2 [29], [30]. This technique computes the autocorrelation coefficient (ρ) from the model residual ($pe_{t-1} + v_t$) and transforms all original variables into first-differenced lag variables ($X_t^* = X_t - \rho X_{t-1}$ and $Y_t^* = Y_t - \rho Y_{t-1}$). Consequently, the specified empirical regression equations for Model 1 (direct effect) and Model 2 (Moderated effects) are expressed as follows:

$$\begin{aligned} \text{Lag_DPR} &= \alpha + \beta_1 \text{Lag_ETR} + \beta_2 \text{Lag_DER} + \beta_3 \text{Lag_ROA} + \varepsilon & \textbf{(Model 1)} \\ \text{Lag_DPR} &= \alpha + \beta_1 \text{Lag_ETR} + \beta_2 \text{Lag_DER} + \beta_3 \text{Lag_ROA} + \beta_4 \text{Lag_FO} + \beta_5 (\text{Lag_ETR} \times \text{Lag_FO}) + \\ &\quad \beta_6 (\text{Lag_DER} \times \text{Lag_FO}) + \varepsilon & \textbf{(Model 2)} \end{aligned}$$

IV. RESULTS AND DISCUSSION

The initial sample was 360 manufacturing companies listed on the IDX in 2022-2024. 267 firms were excluded because of incomplete Bloomberg data, so the final sample was 93 companies, with 279 observations. On average, 72% of the firm-year observations in the sample are classified as family-owned. The mean Effective Tax Rate (ETR) of 0.23 suggests a moderate effective tax burden. The average Debt to Equity Ratio (DER) of the sampled firms is 0.33, which suggests that these companies use debt in an amount equal to one-third of their total equity. Moreover, the average Dividend Payout Ratio (DPR = 0.46) indicates that on average about 46% of net income is paid to dividends and by looking at its standard deviation we see that this payout has a not negligible variation over our sample (SD=0.27465).

Table 2: Descriptive Statistics

Variable	N	Min	Max	Mean	Std Dev.
DPR	279	0.01	1.54	0.46	0.27
ETR	279	0.01	0.54	0.23	0.06
DER	279	0.00	2.98	0.33	0.41
FO	279	0	1	0.72	0.45
ROA	279	0.00	0.33	0.09	0.06

Prior to hypothesis testing, classical assumption tests were conducted to ensure that the linear regression estimates fulfilled the Best Linear Unbiased Estimator (BLUE) conditions [31]. The normality of the residuals for both models was evaluated using the Kolmogorov-Smirnov test with Monte Carlo significance. The test yielded significance values of 0.176 for Model 1 and 0.163 for Model 2. Because both values comfortably exceed the standard 0.05 significance threshold, the error terms across both empirical specifications are confirmed to follow a normal distribution.

Multicollinearity was diagnosed by examining the Tolerance and Variance Inflation Factor (VIF) values for all explanatory variables, including the interaction terms in the moderated regression model. Across Model 1 and Model 2, the Tolerance values ranged from 0.149 to 0.921, while VIF values ranged between 1.086 and 6.716. Since all Tolerance values remain strictly above 0.10 and VIF metrics are below the critical threshold of 10.1, multicollinearity does not pose a concern in either model. Furthermore, heteroskedasticity was assessed using the Glejser test by regressing the absolute residuals against the respective independent, control, and moderating variables. The resulting significance values across all parameters ranged from 0.325 to 0.999, failing to reach statistical significance ($p > 0.05$) and thereby confirming the presence of homoscedasticity.

Initial diagnostic tests for serial dependence revealed first-order autocorrelation in both baseline specifications, indicated by original Durbin-Watson (DW) statistics of 1.252 for Model 1 and 1.240 for Model 2. To resolve this violation without sacrificing valid firm-year observations, the Cochrane-Orcutt transformation diagnostic procedure was executed across both equations. Post-transformation diagnostic checks yielded revised DW statistics of 1.979 for Model 1 and 1.995 for Model 2. Comparing these values against the upper decision boundaries ($d_u < DW < 4 - d_u$), verifying that both transformed regression models are completely free from autocorrelation issues.

Table 3: Normality Test

Model	Sig	Conclusion
1	1.176	Normally distributed
2	0.163	Normally distributed

Table 4: Multicollinearity Test

	Model 1		Model 2	
	Tolerance	VIF	Tolerance	VIF
ETR	0.852	1.179	0.234	4.269
DER	0.921	1.086	0.149	6.716
FO			0.854	1.170
FOxETR			0.244	4.101
FOxDER			0.153	6.524
ROA	0.800	1.250	0.782	1.279

Table 5: Heteroskedasticity Test

	Model 1 sig	Model 2 sig
ETR	0.428	0.437
DER	0.325	0.999
FO		0.327
FOxETR		0.871
FOxDER		0.625
ROA	0.338	0.338

After checking the classical assumptions, a simple OLS regression was performed for transformed variables in Model 1 direct effect and a Moderated Regression Analysis (MRA) as an empirical test of correlation between the moderator variable and dependent/independent variables was conducted using the ordinary least squares method for Model 2 moderated effects. Model 1 examines the immediate effects of tax efficiency (Lag_ETR) and capital structure change level (lag_DER) on optimal dividend policy (Lag_DPR) whilst controlling for firm profitability levels Lag_ROA). The baseline equation is statistically significant (F-statistic, $p < 0.001$), and its adjusted R² of 0.121 indicates that the explanatory variables employed in this study can explain a collective average total variance regarding dividend payout decisions within listed manufacturing firms, accounting for only 12.1%.

The estimation results of Model 1 make clear the individual association with corporate dividend policy based on regression parameters. The wide constant of 0.192 ($p = -0.049$) is the level in expected dividend payment where all explanatory metrics are set at zero. For the hypothesis, Lag_ETR as a measure of tax efficiency has a positive coefficient ($\beta = 0.508$) but is not statistically significant because $p = 0.137 > 0.05$.) Therefore, H1 is rejected: efficient tax-planning does not determine dividend payout in Indonesian manufacturing companies. On the other hand, capital structure measured by Lag_DER has a negative and statistically significant effect on dividend payouts ($\beta = -0.200$, $t = -3.623$, $p < 0.0001$), thus H2 is supported. This finding suggests that increased leverage constrains firms from paying dividends. Moreover, the control variable Lag_ROA shows a strong positive effect ($\beta = 1.121$, $t = 4.179$, $p < 0.001$), affirming that more profitable firms have a higher ability to pay dividends to shareholders.

Model 2 includes Lag_FO and the interaction terms of Lag_ETR*Lag_FO, while gauging family ownership's moderating role. The addition of these moderating terms increases the overall explanatory strength of this model, with an adjusted R² = 0.162 and a significant Overall Model ($p < 0.001$). However, partial moderation dynamics beckon some confusing results.

The interaction between tax efficiency and family ownership (Lag_ETR $\times$ Lag_FO) is positive, significant at the 1 percent level. However, given that its positive sign is counter to the direct ETR paths specified in Model 2, we conclude collective family ownership acts as a mitigating influence (rather than merely an amplifying one), and hence H3 is rejected. While the interaction term of capital structure and family ownership (Lag_DER Lag_KK) has a negative coefficient, as with $\beta = -0.016$, $t = -0.105$ and is not statistically significant at $p = 0.916 > 0.05$, as a result, H₄ is rejected, concluding that family ownership does not significantly moderate the negative relationship between financial leverage and corporate dividend policy in Indonesian listed manufacturing enterprises.

Table 6: Model Summary and Goodness of Fit

Model	Adj ^t R ²	F-statistic (Sig.)	
1	0.121	0.000 ($p < 0.001$)	Explains 12.1% of the variance in Dividend Payout Ratio
2	0.162	0.000 ($p < 0.001$)	Explain 16.2% of the variance in the Dividend Payout Ratio.

Table 7: Summary of Regression Results

Variable	Model 1		Model 2	
	β	Sig (p-value)	β	Sig (p-value)
Constant	0.192	0.002 ($p < 0.005$)	0.457	0.000 ($p < 0.001$)
Lag ETR	0.508	0.137	-1.072	0.092
Lag DER	-0.200	0.000 ($p < 0.001$)	-0.147	0.276
Lag ROA	1.121	0.000 ($p < 0.001$)	1.146	0.000 ($p < 0.001$)
Lag FO			-0.113	0.005 ($p \leq 0.005$)
Lag ETR*Lag FO			2.021	0.005 ($p \leq 0.005$)
Lag DER*Lag FO			-0.016	0.916

V. CONCLUSION

This study analyzes the effect of tax efficiency and capital structure on dividend policy with family ownership as a moderating variable. The research sample is 93 manufacturing companies listed on the IDX for the period 2022-2024, consisting of 279 observations of the company. The analysis enables four key conclusions to be drawn. First, tax efficiency (ETR) is not statistically significantly related to dividend policy, indicating that dividend-related decisions in this sample are not affected by the results of tax-planning activities. Second, capital structure (DER) has a significant negative impact on dividend policy, which implies that firms with higher leverage pay smaller dividends, a phenomenon consistent with the disciplinary role of creditors as argued by agency theory. Third, family ownership does not strengthen the positive effect of tax efficiency on dividend policy, but rather the interaction effect is contrary to the direct effect, suggesting a principal conflict rather than an increased alignment. Fourth, the negative effect of capital structure on dividend policy is not significantly moderated by family ownership, perhaps due to the heterogeneous payout practices of family-controlled firms.

This study has a number of limitations that offer opportunities for further investigation. The 3-year observation period (2022-2024) might not be enough to understand longer-term dynamics fully; tax efficiency was operationalized only by ETR, which does not differentiate between legal tax-planning practices and more aggressive forms of tax avoidance; family ownership is measured by a simple dummy variable, which does not reflect the real degree of family control, and the adjusted R² values (0.121 and 0.162) indicate that a large part of the variation in dividend policy is still unexplained. Therefore, we recommend future studies to extend the observation horizon to a minimum of five years, use alternative proxies of tax efficiency, such as the Book-Tax Difference or the Cash Effective Tax Rate, and measure family ownership using continuous indicators, such as the ownership percentage or the level of generational involvement.

The results, from a theoretical point of view, reinforce the applicability of agency theory in explaining dividend policy in an emerging-market setting with concentrated family ownership. Capital structure is the main external disciplinary mechanism, while family ownership introduces principal-principal dynamics, which tend to complicate, rather than provide a simple reinforcement to, the relationship between tax efficiency and dividend policy. In practical terms, investors evaluating manufacturing companies should focus more on historic dividend consistency and gearing ratios than tax efficiency indicators. Non-family firms should be cautious in keeping their leverage to preserve their ability to pay dividends, and family-controlled firms should improve their internal governance structures to make sure that the tax efficiency gains are used to support sustainable dividend policy and not concentrated as private benefits.

This study acknowledges several limitations that provide valuable opportunities for future research. The adjusted R² values 12.1% and 16.2% indicate that significant determinants of dividend payouts remain unobserved. Future research should be encouraged to increase the observation time horizon beyond five years, use other tax measures, e.g., Cash ETR or Book-Tax Differences and include a continuous family ownership proxy as well as stricter financial proxies such as free cash flow and liquidity constraints.

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