

Leverage and Dividend Payout Among Manufacturing Firms Listed on the Nairobi Securities Exchange, Kenya

Michael Ndung'u Muriu¹, Kalundu Kimanzi², Lucy Njogu³

^{1,2,3}Jomo Kenyatta University of Agriculture and Technology, P.O. Box 62000-00200, Nairobi, Kenya

ABSTRACT: Dividend payout remains an important corporate financial decision because it determines the proportion of earnings distributed to shareholders while balancing firms' financing and investment needs. This study examined the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange, Kenya. The study was anchored on Agency Theory and adopted an explanatory research design using a quantitative approach. A census of all ten manufacturing and allied firms listed on the Nairobi Securities Exchange was undertaken using secondary data extracted from audited annual financial statements covering the period 2016–2025. The analysis was based on an unbalanced panel of 85 firm-year observations and employed panel regression analysis. The Hausman specification test supported the use of the random effects model. The findings revealed that leverage had a negative but statistically insignificant effect on dividend payout ($\beta = -0.003$, $p = 0.388$), indicating that debt financing did not significantly influence dividend distribution decisions among the sampled firms. The study concludes that leverage is not a significant determinant of dividend payout among manufacturing firms listed on the Nairobi Securities Exchange. It recommends that firms maintain prudent debt management practices while considering other financial factors in formulating dividend policies. The findings contribute to the corporate finance literature by providing empirical evidence on the relationship between leverage and dividend payout within Kenya's manufacturing sector.

KEYWORDS: Leverage, Dividend Payout, Manufacturing Firms, Nairobi Securities Exchange, Kenya

1. INTRODUCTION

Dividend payout is a fundamental corporate financial policy that determines the proportion of earnings distributed to shareholders while balancing firms' financing and investment needs. It is widely regarded as an indicator of financial performance, stability, and shareholder value (Jensen & Meckling, 1976; Fama & French, 2001). Among the firm-specific determinants of dividend policy, leverage has received considerable attention because debt obligations compete with dividend payments for available financial resources (Modigliani & Miller, 1958). Empirical evidence from developed and emerging economies generally suggests that highly leveraged firms are less likely to distribute dividends, although the magnitude and significance of this relationship vary across institutional contexts (Xu et al., 2021; Louziri & Oubal, 2022; deSouza Junior et al., 2025). In Kenya, studies have similarly reported mixed findings regarding the effect of leverage on dividend payout, with most evidence drawn from banking, insurance, or broad samples of listed firms rather than manufacturing companies (Kathuo et al., 2020; Mogire & Muturi, 2024). Consequently, limited empirical evidence exists on the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange, thereby motivating the present study.

2. STATEMENT OF THE PROBLEM

Dividend payout is a critical corporate financial decision because it determines the proportion of earnings distributed to shareholders and the amount retained for future investment. Among manufacturing firms listed on the Nairobi Securities Exchange (NSE), dividend payout practices vary considerably. Firms such as British American Tobacco Kenya PLC, East African Breweries PLC, B.O.C. Kenya PLC, and Carbacid Investments PLC have consistently distributed dividends, reflecting relatively stable financial performance. In contrast, firms including Eveready East Africa PLC, Flame Tree Group Holdings PLC, Mumias Sugar Company PLC, and Africa Mega Agricorn PLC have experienced prolonged periods of irregular or suspended dividend payments due to financial distress, restructuring, and earnings retention strategies (Nairobi Securities Exchange, 2025). These disparities create uncertainty regarding the financial factors that influence dividend payout decisions within the sector.

Leverage and Dividend Payout Among Manufacturing Firms Listed on the Nairobi Securities Exchange, Kenya

Although leverage is widely recognized as an important determinant of dividend policy, empirical evidence remains inconclusive. While some studies have reported that leverage significantly reduces dividend payout, others have found no statistically significant relationship, suggesting that its influence varies across institutional and economic contexts (Al-Najjar & Kilincarslan, 2020; Akpadaka et al., 2024). Moreover, limited empirical evidence exists on the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange. This study therefore examined the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange, Kenya.

3. OBJECTIVE OF THE STUDY

To determine the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange, Kenya.

4. RESEARCH QUESTION

What is the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange, Kenya?

5. LITERATURE REVIEW

5.1 Theoretical Review - Agency Theory

Agency Theory, developed by Jensen and Meckling (1976), explains conflicts of interest between managers and shareholders arising from the separation of ownership and control. The theory posits that debt financing can restrict managerial discretion by imposing mandatory interest and principal payments, thereby reducing the free cash flow available for discretionary investment and dividend distribution. Consequently, highly leveraged firms may pay lower dividends because debt-servicing obligations compete with shareholder distributions for available cash resources. Although debt does not invariably discipline managerial behavior, particularly in markets characterized by institutional and governance constraints, Agency Theory provides an appropriate framework for explaining the expected relationship between leverage and dividend payout among manufacturing firms listed on the Nairobi Securities Exchange.

5.2 Conceptual Framework

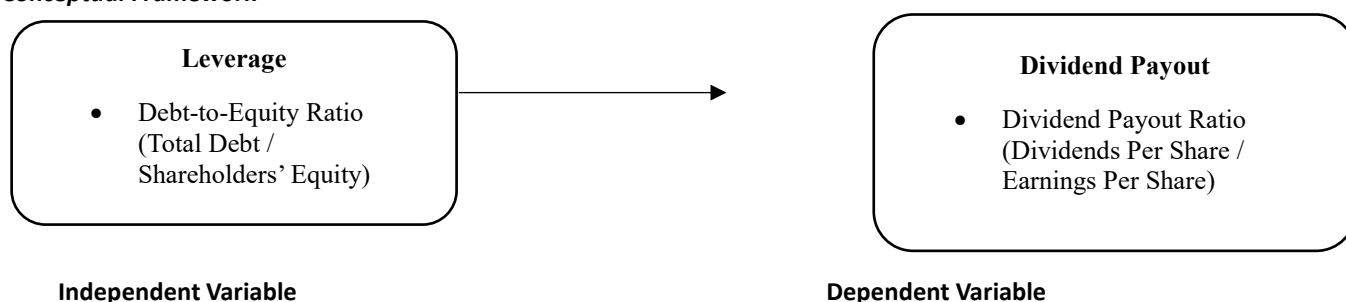


Figure 1 Conceptual Framework

5.2.1 Leverage

Leverage refers to the extent to which a firm finances its operations through debt relative to shareholders' equity (Modigliani & Miller, 1958). It influences a firm's financial risk, capital structure, and ability to meet fixed financial obligations, which in turn affects dividend policy. Firms with higher leverage are generally expected to pay lower dividends because a substantial proportion of cash flows is allocated to servicing debt rather than distributing earnings to shareholders. In this study, leverage was measured using the Debt-to-Equity Ratio (DER), calculated as total debt divided by shareholders' equity, a widely accepted indicator of financial leverage (Al-Najjar & Kilincarslan, 2020).

5.2.2 Dividend Payout

Dividend payout refers to the proportion of a firm's earnings distributed to shareholders as dividends rather than retained for reinvestment (Jensen & Meckling, 1976). It reflects management's dividend policy and the firm's capacity to balance shareholder returns with future financing needs. A higher dividend payout ratio indicates that a larger share of earnings is distributed to shareholders, whereas a lower ratio suggests greater earnings retention for investment and growth. In this study, dividend payout was measured using the Dividend Payout Ratio (DPR), calculated as dividends per share divided by earnings per share, which provides a direct measure of a firm's dividend distribution policy (Lyimo, 2024).

5.3 Empirical Review

Empirical evidence generally suggests that leverage is an important determinant of dividend payout, with most studies reporting a negative relationship between debt financing and firms' dividend distribution decisions. Al-Najjar and Kilincarslan (2020)

Leverage and Dividend Payout Among Manufacturing Firms Listed on the Nairobi Securities Exchange, Kenya

examined the effect of firm-specific and country-specific factors on dividend policy in emerging markets and found that highly leveraged firms distributed lower dividends because debt-servicing obligations reduced the cash available for shareholder distributions. Similarly, Akpadaka et al. (2024) investigated whether profitability moderates the relationship between leverage and dividend policy among listed manufacturing firms in Nigeria and South Africa. The study found that leverage had a significant negative effect on dividend policy in the pooled sample, although the relationship was insignificant among South African firms, highlighting the influence of institutional and market differences. In Kenya, Mogire and Muturi (2024) examined the influence of firm financial characteristics on dividend payout among listed insurance companies and found that leverage had an insignificant effect on dividend payout. However, the study focused on insurance companies rather than manufacturing firms, thereby leaving a contextual gap that the present study sought to address.

6. RESEARCH METHODOLOGY

This study adopted an explanatory research design using a quantitative approach to examine the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange, Kenya. A census of all ten manufacturing and allied firms listed on the NSE was undertaken using secondary data extracted from audited annual financial statements for the period 2016–2025. Due to incomplete financial information for some firm-year observations, the analysis was based on an unbalanced panel comprising 85 observations. Data were analyzed using Stata Version 18 through descriptive statistics and panel regression analysis. Fixed Effects and Random Effects models were estimated, with the Hausman Specification Test used to determine the appropriate model for the analysis. Prior to model estimation, diagnostic tests for normality, heteroscedasticity, serial correlation, and model specification were conducted to assess the validity of the panel regression assumptions. The panel regression model specified dividend payout as the dependent variable and leverage as the explanatory variable. Statistical significance was evaluated at the 5% level.

7. RESULTS AND DISCUSSION

7.1 Descriptive Statistics for Dividend Payout Ratio

Table 1: Descriptive Statistics for Dividend Payout Ratio

Statistic	DPR
Observations	85
Mean	0.3952
Standard Deviation	0.4751
Minimum	0.0000
Maximum	2.0408

The dividend payout ratio recorded a mean of 0.3952 and a standard deviation of 0.4751 based on 85 firm-year observations. This indicates that manufacturing firms listed on the Nairobi Securities Exchange distributed, on average, 39.5% of their earnings as dividends during the study period. The minimum value of 0.0000 shows that some firms did not pay dividends in certain years, while the maximum value of 2.0408 indicates that some firms distributed dividends exceeding current earnings, possibly by drawing on retained earnings or accumulated reserves. The relatively high standard deviation reflects substantial variation in dividend payout practices across firms and over time.

7.2 Descriptive Statistics for Leverage

Table 2: Descriptive Statistics for Leverage

Statistic	Leverage
Observations	85
Mean	0.8682
Standard Deviation	2.8727
Minimum	-17.1070
Maximum	15.3894

The leverage ratio recorded a mean of 0.8682 and a standard deviation of 2.8727 based on 85 firm-year observations, indicating considerable variation in the capital structures of the sampled manufacturing firms. The minimum value of -17.1070 reflects firms with negative shareholders' equity, whereas the maximum value of 15.3894 indicates that some firms relied heavily on debt financing. Overall, the results suggest substantial differences in leverage levels across firms during the study period.

7.3 Trend Analysis for Dividend Payout Ratio

The study conducted a trend analysis of the annual mean dividend payout ratio across the study period. The findings are presented in Figure 2.

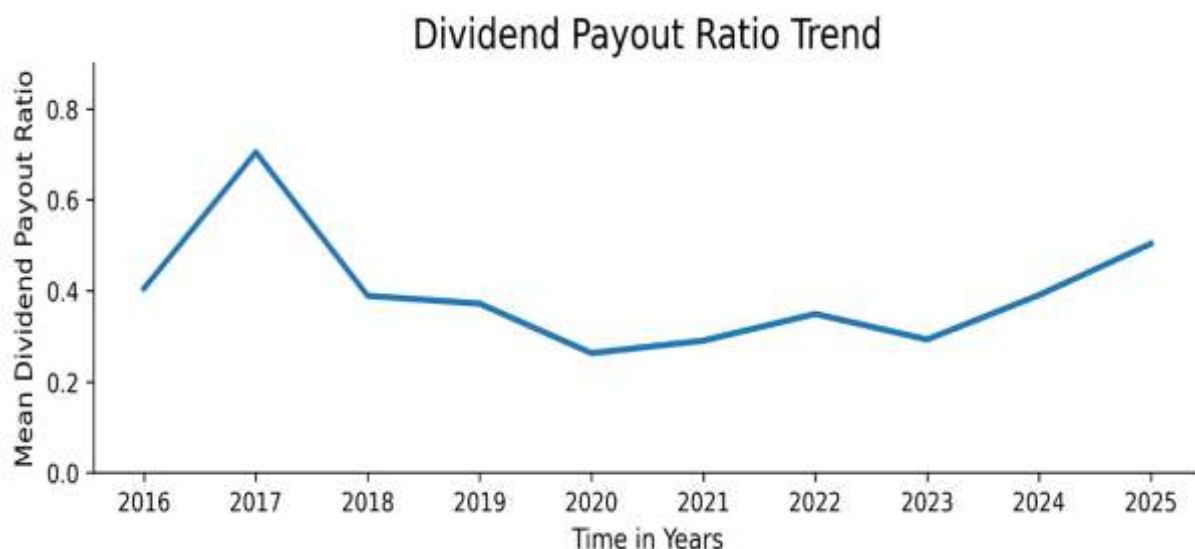


Figure 2: Trend of Dividend Payout Ratio.

The dividend payout ratio exhibited notable fluctuations over the 2016-2025 period. Dividend payments increased to a peak in 2017 before declining steadily to their lowest level in 2020, reflecting a more conservative dividend policy during a period of economic uncertainty. Thereafter, the dividend payout ratio recovered gradually from 2021 and increased substantially by 2025, suggesting an improvement in the financial performance and dividend-paying capacity of manufacturing firms listed on the Nairobi Securities Exchange.

7.4 Trend Analysis for Leverage

The study conducted a trend analysis of the annual mean leverage across the study period. The findings are presented in Figure 3.

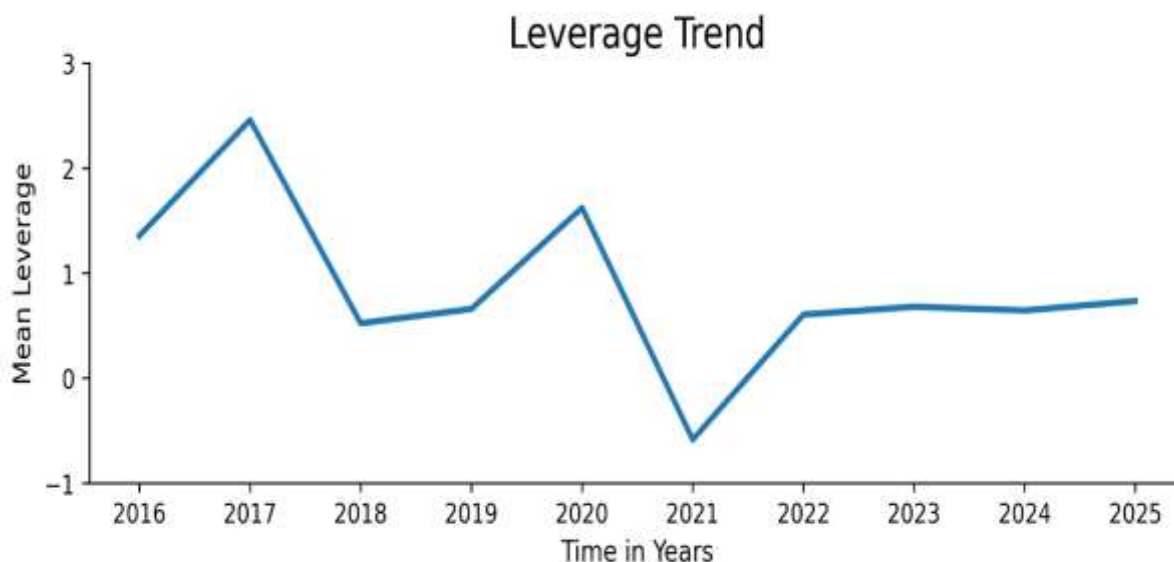


Figure 3: Trend of Leverage

Leverage exhibited substantial fluctuations over the 2016–2025 period, reflecting changes in the financing decisions of manufacturing firms listed on the Nairobi Securities Exchange. Leverage peaked in 2017 before declining in subsequent years and reached a negative average value in 2021, largely due to negative shareholders' equity among some firms. Thereafter, leverage recovered and remained relatively stable through 2025, suggesting that firms gradually adjusted their capital structures in response to changing financial and economic conditions.

Leverage and Dividend Payout Among Manufacturing Firms Listed on the Nairobi Securities Exchange, Kenya

7.5 Correlation Analysis

Correlation analysis was undertaken to establish the degree of association between dividend payout ratio and leverage. The findings are presented in Table 3.

Table 3: Pearson Correlation Matrix

Variables	DPR	LEV
Dividend Payout Ratio (DPR)	1.000	
Leverage (LEV)	-0.131	1.000

Pearson correlation analysis revealed a weak negative relationship between leverage and dividend payout ratio ($r = -0.131$, $p = 0.231$). However, the relationship was not statistically significant, suggesting that leverage was not independently associated with dividend payout among manufacturing firms listed on the Nairobi Securities Exchange. This finding provided preliminary evidence of a weak association between leverage and dividend payout, thereby justifying further examination using panel regression analysis.

7.6 Diagnostic Tests

Prior to estimating the panel regression model, diagnostic tests were conducted to assess the validity of the model assumptions. The Shapiro–Wilk test indicated that the study variables were not normally distributed, a common characteristic of financial panel data that does not invalidate regression analysis. The Breusch–Pagan/Cook–Weisberg test ($\chi^2 = 2.83$, $p = 0.0922$) indicated that heteroscedasticity was not statistically significant, while the Wooldridge test for serial correlation ($F = 1.423$, $p = 0.2634$) confirmed the absence of first-order autocorrelation. Furthermore, the Hausman specification test ($\chi^2 = 6.46$, $p = 0.1675$) supported the use of the Random Effects model for the panel regression analysis. Collectively, these diagnostic results confirmed the suitability of the data and the selected model for regression estimation.

7.7 Panel Regression Analysis

Panel regression analysis was conducted using an unbalanced panel dataset comprising 85 firm-year observations from ten manufacturing firms listed on the Nairobi Securities Exchange over the period 2016–2025. The Hausman specification test produced a statistically insignificant result ($\chi^2 = 6.46$, $p = 0.1675$), indicating that the Random Effects model was more appropriate. Consequently, the Random Effects model estimated with cluster-robust standard errors was adopted for interpretation.

7.7.1 Fixed Effects Model

The study estimated the fixed effects model to examine the effect of leverage on dividend payout ratio while controlling for unobserved firm-specific characteristics that remain constant over time. The fixed effects model assumes that firm-specific effects are correlated with the explanatory variables and therefore controls for time-invariant heterogeneity across firms. The estimation results are presented in Table 4.

Table 4: Fixed Effects Regression Results

Variable	Coefficient	Std. Error	t-value	p-value
Leverage	0.0004	0.0137	0.03	0.978
Constant	0.7573	1.1770	0.64	0.522

Model Statistics

Statistic	Value
Number of observations	85
Number of firms	10
Within R ²	0.0133
Between R ²	0.0813
Overall R ²	0.0474
F Statistic	0.24
Prob > F	0.9154

The fixed effects results showed that leverage had a positive but negligible coefficient ($\beta = 0.0004$). However, the effect was not statistically significant ($t = 0.03$, $p = 0.978$), indicating that changes in leverage did not significantly influence dividend payout

Leverage and Dividend Payout Among Manufacturing Firms Listed on the Nairobi Securities Exchange, Kenya

within firms over the study period. The model recorded a within R^2 of 0.0133, implying that leverage explained approximately 1.33% of the within-firm variation in dividend payout. Overall, the model was not statistically significant ($F = 0.24$, $p = 0.9154$).

7.7.2 Random Effects Model

The random effects model was subsequently estimated to examine the relationship between leverage and dividend payout ratio. To improve the reliability of statistical inference, the model was estimated using cluster-robust standard errors. The results are presented in Table 5.

Table 5: Random Effects Regression Results

Variable	Coefficient	Robust Std. Error	z-value	p-value
Leverage	-0.0026284	0.0030445	-0.86	0.388
Constant	0.3451322	0.1278607	2.70	0.007

Model Statistics

Statistic	Value
Number of Observations	85
Number of Firms	10
Overall R^2	0.0173
Wald Chi-square	0.75
Prob > Chi-square	0.3879

The random effects model recorded an overall R^2 of 0.0173, indicating that leverage explained approximately 1.73% of the variation in dividend payout ratio across firms and over time. The overall model was not statistically significant (Wald $\chi^2 = 0.75$, $p = 0.3879$). The estimated coefficient for leverage was negative ($\beta = -0.0026284$), suggesting that an increase in leverage was associated with a decrease in dividend payout ratio. However, the relationship was not statistically significant ($z = -0.86$, $p = 0.388$), indicating that leverage did not significantly influence dividend payout among manufacturing firms listed on the Nairobi Securities Exchange during the study period.

7.7.3 Estimated Regression Equation

Based on the coefficients presented in Table 5, the estimated random effects equation was specified as follows:

$$DPR_{it} = 0.3451 - 0.0026LEV_{it} + \varepsilon_{it}$$

Where:

DPR_{it} = Dividend payout ratio of firm i in year t

LEV_{it} = Leverage of firm i in year t , measured by the Debt-to-Equity Ratio

β_0 = Intercept

β_1 = Coefficient of leverage

ε_{it} = Random error term

i = Manufacturing firm

t = Time period (2016–2025)

The findings indicate that leverage had a negative but statistically insignificant effect on dividend payout ($\beta = -0.0026$, $z = -0.86$, $p = 0.388$). Although the negative coefficient suggests that firms with higher leverage tended to distribute lower dividends, the effect was not statistically significant. The null hypothesis that leverage has no significant effect on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange was therefore not rejected.

7.7.4 Discussion of Findings

The findings revealed that leverage had a negative but statistically insignificant effect on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange. The negative coefficient is consistent with Agency Theory, which suggests that debt-servicing obligations reduce the financial resources available for shareholder distributions. However, the insignificant effect indicates that leverage was not a decisive determinant of dividend payout among the sampled firms. The result may suggest that manufacturing firms maintain dividend payments despite variations in debt levels or that other financial characteristics exert a stronger influence on dividend decisions. The finding is broadly consistent with Mogire and Muturi (2024), who reported an insignificant relationship between leverage and dividend payout among insurance companies listed on the NSE, although their coefficient was positive. Differences across sectors may reflect variations in regulation, capital requirements, cash-flow stability, and financing structures.

8 SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1 Summary

The study examined the effect of leverage on dividend payout among manufacturing firms listed on the Nairobi Securities Exchange. The findings revealed that leverage had a negative but statistically insignificant effect on dividend payout, indicating that debt financing was not a significant determinant of firms' dividend distribution decisions during the study period.

8.2 Conclusion

The study concludes that leverage does not significantly influence dividend payout among manufacturing firms listed on the Nairobi Securities Exchange. Although higher leverage was associated with lower dividend payouts, the relationship was not statistically significant, suggesting that dividend policy is likely influenced by factors other than debt financing.

8.3 Recommendation

Manufacturing firms should continue to maintain prudent debt management practices to achieve an optimal capital structure while considering other financial factors that influence dividend policy. Investors should evaluate dividend-paying potential using a broad range of firm-specific financial indicators rather than relying solely on leverage.

REFERENCES

- 1) Akpadaka, O. S., Farouk, M. A., Dang, D. Y., & Fodio, M. I. (2024). Does profitability moderate the relationship between the leverage and dividend policy of manufacturing firms in Nigeria and South Africa? *Journal of Risk and Financial Management*, 17(12), 563. <https://doi.org/10.3390/jrfm17120563>
- 2) Al-Najjar, B., & Kilincarslan, E. (2020). The effect of firm-specific and country-specific factors on dividend policy: Evidence from emerging markets. *International Review of Financial Analysis*, 69, 101458. <https://doi.org/10.1016/j.irfa.2020.101458>
- 3) DeSouza Junior, W. D., Hijazi, M. M., & da Silva, T. P. (2025). Determinants of dividend payout policy: More evidence from emerging markets of the G20 bloc. *International Journal of Finance & Economics*, 30(4), 4113–4124. <https://doi.org/10.1002/ijfe.3111>
- 4) Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics*, 60(1), 3–43. [https://doi.org/10.1016/S0304-405X\(01\)00038-1](https://doi.org/10.1016/S0304-405X(01)00038-1)
- 5) Hussain, A., & Akbar, M. (2022). Dividend policy and earnings management: Do agency problems and financing constraints matter? *Borsa Istanbul Review*, 22(5), 839–853.
- 6) Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- 7) Kathuo, S. M., Oluoch, O., & Njeru, A. (2020). Influence of financial performance and financial leverage on dividend payout. *International Journal of Accounting, Finance and Risk Management*, 5(3), 167–173.
- 8) Khan, K. I., Ahmad, W., & Ilyas, M. (2021). Impact of firm characteristics on dividend payout policy: Evidence from developing economies. *Cogent Economics & Finance*, 9(1), 1936247. <https://doi.org/10.1080/23322039.2021.1936247>
- 9) Louziri, R., & Oubal, K. (2022). Determinants of dividend policy: The case of the Casablanca Stock Exchange. *Journal of Risk and Financial Management*, 15(12), 548. <https://doi.org/10.3390/jrfm15120548>
- 10) Lyimo, G. D. (2024). Determinants of dividend payout policies of manufacturing companies listed on the Dar es Salaam Stock Exchange. *Business Education Journal*, 10(1), 19–33. <https://doi.org/10.54156/0zr45m36>
- 11) Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48(3), 261–297.
- 12) Mogire, R. K., & Muturi, W. M. (2024). Firm financial characteristics and dividend payout of listed insurance companies in Nairobi Securities Exchange. *International Academic Journal of Economics and Finance*, 4(1), 195–217.
- 13) Nairobi Securities Exchange. (2025). *Listed companies*. <https://www.nse.co.ke/listed-companies/>
- 14) Xu, D., Gan, C., Li, Z., & Wang, P. (2021). Earnings, working capital and dividend payout. *Annals of Economics and Finance*, 22(2), 421–449.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.