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Understanding Dividend Decisions in ASEAN Healthcare Firms: A Policy-Driven Empirical Perspective

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Abstract. *ASEAN nations' healthcare sectors have grown as a result of rising healthcare demand, demographic shifts and increased government participation in health finance. In this context, dividend policy is an important financial choice since it signals stability of a company and success to investors while balancing reinvestment demands in a capital-intensive industry. Looking at the importance of the healthcare sector, the present research empirically examines the dividend policy decisions of publicly listed healthcare firms across ASEAN countries from 2019 to 2023 and sees how firm-specific characteristics and important macroeconomic variables, i.e., government healthcare expenditure, GDP and inflation, affect them. The study uses Pooled OLS on the panel data from selected ASEAN nations, with the random effects model chosen using the Hausman test. The result of overall ASEAN countries exhibits that all firm-specific and macro-economic variables, except inflation, exert a significant impact on the dividend payout ratio. Further, the present study uses the Generalised Method of Moment of the Arellano-Bond to address the issue of endogeneity and support the findings that we draw. Overall, the initial panel regression results are substantially supported by the GMM estimate results. In the context of ASEAN healthcare firms, this study fills the theoretical and contextual gap by examining the combined impact of macroeconomic variables (i.e., government healthcare expenditure, GDP and inflation) and firm-specific variables on dividend payout ratio. From the policy standpoint, the results show that continuous and predictable government healthcare funding might influence corporate payment behavior and minimize uncertainty in financial planning of the healthcare sector.*

Keywords: *dividend policy, firm-specific, macroeconomic, random-effects model, fixed-effects model, ASEAN nations*

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1. Introduction

All successful businesses generate profits. This profit might be distributed as dividends to shareholders, invested in operational assets, to settle off debt, or to purchase securities (Amidu & Abor, 2006). Dividends are the percentage of profits that a company decides to pay out to its shareholders in cash. In order to raise the firm's value, management's primary goal is to create a dividend policy that balances shareholders' demands for current income with those for projected future development (Bhalla, 2014). These days, the healthcare sector appears to play a significant role in a nation's economy. According to the data of the World Health Organization, ASEAN's average per capita expenditure on healthcare is US$630, or approximately 4.7% of GDP, and total current health expenditure is USD$156.3 billion as of 2021, marking a 42% increase from 5 years earlier. After the COVID-19 pandemic, the ASEAN healthcare sector has shown sudden growth and investment prospects, especially in pharmaceuticals, biotechnology and diagnostic medicine.

Governments of ASEAN countries have also invested a large sum of money to improve healthcare facilities and services. Singapore spent about USD 15.6 billion on healthcare in 2025, which was the second-largest budget item after the military. Thailand's government has launched economic stimulus measures, including expanded universal healthcare, to attain a 3.5% GDP growth rate by 2025. These sources highlight how public healthcare spending in ASEAN countries is not only vital for improving health outcomes but also serves as a key component in economic development and stability. In this context, dividend policy is an important financial choice since it signals a company's stability and success to investors while balancing reinvestment demands in a capital-intensive industry.

Numerous researchers have found a variety of factors that influence dividend policy in different sectors and countries (Amidu & Abor, 2006; Dewasiri et al., 2019; Nadeem et al., 2018). However, existing literature is largely based on a multi-sector analysis and mostly concentrates on firm-level factors, paying little attention to sector-specific behavior. Consequently, there is still a lack of research on sector-specific behavior and the impact of macroeconomic and dividend policy variable specifically in the healthcare sector of ASEAN nations. Therefore, to fill this gap, the researchers want to explore the impact of micro- as well as macroeconomic variables, including government healthcare spending, GDP and inflation, on the dividend policy of the healthcare sector in the ASEAN countries. This study adds to the realm by offering fresh insights on the role of government healthcare spending, which has received little consideration in previous dividend policy related studies.

The present study used the Ordinary Least Square regression approach to attain the objective of the present study. According to the Hausman test null hypothesis, the random effects model is superior to the fixed effects model. The result of overall ASEAN countries exhibits that all firm-specific and macro-economic variables, except in-

flation, exert a significant impact on the dividend payout ratio. The empirical findings demonstrate that dividend distributions in the ASEAN healthcare sector are driven by multiple economic mechanisms. The empirical results of the present study align with the several previous studies by Gill et al. (2010), Tahir et al. (2015), Atmaja (2017), Bostanci (2018), Angelia and Toni (2020), Lotto (2020), Rinanda (2022), and Mahendra (2023). The present study adds to the current literature in various ways. Firstly, it broadens dividend research in the ASEAN nations' healthcare sector, it also includes government healthcare expenditure as a sector-specific policy variable, emphasizing the importance of public intervention in corporate payout decisions. By using a mechanism-based analysis of dividend behavior, the study increases theoretical knowledge of how signaling, agency cost and macroeconomic variables interact to impact the dividend policy in developing economies.

There are five sections in the study. Section 2 presents empirical investigations aligned with the objectives. Section 3 explains the research methodology employed. The results and their discussion are presented in Section 4. Finally, Section 5 includes a summary with a discussion of the practical implications.

Theoretical Background

The impact of dividend payments on a company's value is the subject of various theories. The dividend irrelevance theory proposed by Miller and Modigliani (1961) has been challenged by academics who argue that dividend payments can affect firm value because real-world capital markets are characterized by imperfections such as asymmetric information and agency issues (Nadeem et al., 2018; Bergeron, 2024). As per several studies, agency issues also play a significant role in understanding how corporations behave when it comes to their dividend payment (Jensen & Meckling, 1976; Rozeff, 1982; Easterbrook, 1984). The agency cost is reduced by the dividend decision taken by financial managers (Bergeron, 2024). As per signaling theory proposed by Bhattacharya (1980), managers are more cognizant of the company's investment than external shareholders, and they use the dividend as a means of informing the external party about the company's success (Bostanci et al., 2018; Yakubu, 2019; Bergeron, 2024). The pecking order theory states that firms will keep their profits, especially when they are profitable and prefer internal financing over external capital, which will lead to reduced dividends (Myers & Majuluf, 1984). Additionally, residual dividend theory also states that companies should only pay out dividends after funding all initiatives with positive net present value (Higgins, 1972).

2. Literature Review

Lintner (1956) and Fama and Babiak (1968) were the first to examine the dividend policy of US corporations and observed that the most significant determinants are earn-

ings and previous dividend payments (Farooq et al., 2024). Fama and French (2001) examined the attributes of companies that pay dividends. They found that bigger and more prosperous companies are more likely to pay dividends to their owners. Ajanthan (2013), Hafeez et al. (2018), and Aritago et al. (2020) also investigated the various determinants of dividend policy. They concluded that firm size, firm risk, return on assets, return on equity and price–earnings ratio are all significant determinants for dividend policy. Their findings are aligned with those of Fama and French (2001), who claimed that highly profitable companies are able to pay higher dividend payouts.

2.1 Dividend Payout Ratio and the Signaling Mechanism

Signaling theory proposed by Bhattacharya (1980) asserts that companies utilize dividend announcements as a way to let investors know they are financially stable and will continue to be profitable. Market performance and firm-level profitability are frequently used indicators of signaling strength. Profitability reflects the company's capacity to make funds after subtracting all taxes and expenses (Rani et al., 2020). In the present study, ROA is used to assess a firm's profitability. Several researchers indicate a substantial association between dividend payments and return on assets (Malik et al., 2013; Tahir et al., 2015; Hutagaol-Martowidjojo et al., 2019; Angelia & Toni, 2020; Lestari et al., 2021). Similarly, Nerviana (2015), Rinanda (2021), Chaniago and Ekadjaja (2022), and Wijayantini et al. (2022) also show that return on equity has a favorable impact on dividend policy. This favorable relationship is also supported by signaling theory that asserts that a company's higher earnings might provide investors a good insight into the company's prospects by increasing the dividend payments (Al-Najjar, 2011; Brahmaiah, 2018; Chaniago & Ekadjaja, 2022). The price to earnings (PE) ratio is a financial metric that compares the share price of a firm to its earnings per share. An increase in the PE ratio will increase the company's dividend payments (Mahendra, 2023). Several prior studies have investigated the positive association between the price-to-earnings ratio and dividend policy (Nerviana, 2015; Khan et al., 2016; Sharma & Bakshi, 2019; Wijayantini et al., 2022; Mahendra, 2023). Based on the above literature, we formulate the following hypothesis:

H_1: *Signaling mechanism has a significant impact on dividend payout ratio.*

2.2 Dividend Payout Ratio and the Agency Cost Mechanism

According to agency theory, dividend payments may reduce disputes between shareholders and management by lowering free cash flows that can be used for various purposes. As per several studies, agency issues also play a significant role in understanding how corporations behave when it comes to their dividend payment (Jensen & Meckling, 1976; Rozeff, 1982; Easterbrook, 1984). Mature companies pay higher dividends because they have more accumulated and retained profits and have fewer investment

prospects (Sari, 2018). According to the life cycle hypothesis, as a company becomes older, its capacity to generate profits surpasses its lucrative investment possibilities (Baker et al., 2019). The impact of firm age on dividend payout has been widely investigated by Atmaja (2017), Sari (2018), Bostanci (2018), and Khan (2021), who found that firm age has a favorable impact on dividend policy. Thus, we formulate the following hypothesis:

H_2: *Agency cost mechanism has a significant impact on dividend payout ratio.*

2.3 Dividend Payout Ratio and Taxation

According to Brennan (1970) and Masulis and Trueman (1988), taxes have an impact on an organization's corporate dividend policy (Gul et al., 2012). Therefore, the company's management thinks about corporate taxes while deciding the distribution policy (Salvatori et al., 2020). The agency cost theory states that in high-tax contexts, businesses may choose to pay out dividends to save agency costs and prevent an inefficient utilization of retained earnings (Jensen & Meckling, 1976; Easterbook, 1984). Similarly, as per Tax-Induced Dividend Preference theory, companies that are subject to a higher corporate tax rate may decide to increase dividend payments in order to reduce their tax obligations (Feldstein & Green, 1983). Numerous academics, including Amidu and Abor (2006), Gill et al. (2010), and Gul et al. (2012), have noted a positive effect of taxes on the dividend policy. Through dividend payments, firms may shift some of the tax burden from the firm to the shareholder (Gul et al., 2012). Therefore, the study hypothesized that:

H_3: *Taxation mechanism has a significant impact on dividend payout ratio.*

2.4 Dividend Payout Ratio and Macroeconomic Conditions

Macroeconomic and fiscal conditions have a significant impact on companies' payout decisions by affecting investment incentives, after-tax cash flows and earnings stability. In economic terms, inflation is defined as a persistent rise in the cost of goods and services. The Consumer Price Index (CPI) is a widely used tool to gauge inflation. Various researchers (Winarsari & Handini, 2020; Muhammad & Kurniasari, 2022; Rinanda, 2022; Nguyen & Ho, 2025) concluded that inflation is a crucial variable of dividend policy. GDP is used as a proxy for economic growth in this study. The corporate revenue of different companies rises in tandem with an increase in the economy's activity, and this causes the dividend payments to rise accordingly (Ghafoor et al., 2014; Silalahi et al., 2021). This favorable association between economic growth and dividend policy is also revealed in the prior research conducted by Nadeem et al. (2018), Lotto (2020), and Romus et al. (2020). Government healthcare spending as a percentage of GDP is used as a proxy of healthcare expenditure (Yun & Yusoff, 2015; Adeel, 2016; Singh et al., 2022). Some researchers argued that government spending has a negative effect on

economic growth (Folster & Henrekson, 2001; Akpan, 2005); whereas Koman and Bratimasrene (2007) and Ebiringa and Charles-Anyaogu (2012) contended that government spending positively and significantly contributes to economic development. Accordingly, the following hypothesis is framed:

H_4: *Macroeconomics conditions have a significant impact on dividend payout ratio.*

3. Data and Methodology

3.1 Sample Selection

The present study explored the impact of micro- as well as macroeconomic variables, including government healthcare spending, GDP and inflation, on the dividend payout ratio of the healthcare sector in ASEAN countries. The economic integration of ASEAN comprises a total of 10 countries, out of which only 5 countries—Indonesia, Malaysia, Singapore, Thailand and Vietnam—are selected for the present study due to their relatively more developed capital markets, greater concentration of publicly traded healthcare companies and consistent availability of firm-level financial and dividend data throughout the research period. The sample data have been gathered yearly from companies' annual reports and world development indicators from 2019 to 2023. The five-year era encompasses a structurally significant time for the healthcare business, including the COVID-19 pandemic and its immediate impact. The sample selection process for publicly traded healthcare companies in ASEAN nations classified by healthcare sub-sectors is shown in Table 1. Based on the availability of DPR and other financial variables, 190 healthcare enterprises were first evaluated. Out of 190 firms, 100 firms were eliminated due to incomplete or missing DPR information. Subsequently, companies with extreme values were removed, which resulted in the deletion of 19 more firms in order to mitigate any distortion brought on by outliers. Following the execution of these selection criteria, the final sample consists of 71 healthcare firms.

Table 1

Selection Criteria and Distribution of the Sample

Healthcare sector / Sub-sector	IDN	MYS	SGP	THA	VNM	ASEAN 5
Pharmaceuticals	13	8	6	6	21	54
Data avail. for DPR / Final sample	10/9	6/5	2/2	4/1	12/12	34/29
Healthcare Providers & Services	14	13	20	43	1	91
Data avail. for DPR / Final sample	3/3	5/5	10/9	21/17	-	39/34
Healthcare Equipment & Supplies	8	15	9	10	1	43
Data avail. for DPR / Final sample	1/1	5/2	4/2	7/3	-	17/8
Bio-technology & Medical	-	1	-	1	-	2
Data avail. for DPR / Final sample	-	-	-	-	-	-
Total Sample	35	37	35	60	23	190

Healthcare sector / Sub-sector	IDN	MYS	SGP	THA	VNM	ASEAN 5
Data N/A for DPR	21	21	19	28	11	100
Companies were deleted due to outliers	1	4	3	11	-	19
Final Sample	13	12	13	21	12	71
Percentage of dividend-paying firms = No. of firms in final sample/No. of firms in total sample	37%	32%	37%	35%	52%	37%

3.2 Selection of Research Variables

Based on the previous literature, the current study includes DPR as a dependent variable and ROA, LgAGE, PE, TAX, GHS, INF and GDP as independent variables. Table 2 describes the selected variables.

Table 2

Definition of Variables

Variables	Explanation	Previous Studies	Expected Signs
Dividend Payout Ratio (DPR)	Dividend per share/ Earnings per share	Nadeem et al. (2018); Dewasiri et al. (2019)	
Return on Asset (ROA)	Profit after tax/Average total assets	Hutagaol-Martowidjojo et al. (2019); Rani et al. (2025)	+
Firm Age (LgAGE)	Log of number of years a firm has been incorporated	Sari (2018); Atmaja (2017)	+
Price to Earnings (PE)	Share price/Total earnings	Sharma & Bakshi (2019); Wijayantini et al. (2022); Mahendra (2023)	+
Corporate Tax (TAX)	Corporate tax/Profit before tax	Gill et al. (2010); Gul et al. (2012)	+
Government Healthcare Spending (GHS)	Government Healthcare Spending as a percentage of GDP	Adeel (2016); Singh et al. (2022)	+
Inflation (INF)	Consumer price index	Winarsari & Handini (2020); Nguyen & Ho (2025)	-
Gross Domestic Product (GDP)	GDP growth (annual%)	Lotto (2020); Romus et al. (2020); Rani et al. (2025)	+

3.3 Model Specification

The present study endeavors to analyze the explanatory variables that affect the dividend policy of the ASEAN countries from 2019 to 2023. Therefore, we used the Ordinary Least Square regression approach to attain the objective of this study. Each variable in the panel regression equation has a double subscript that differentiates it from an ordinary time-series or cross-section regression. The standard form of the panel data model may be described more compactly as:

$$Y_{i,t} = \alpha_{i,t} + \beta X_{i,t} + \mathcal{E}_{i,t} \quad (1)$$

The subscripts t and i stand for the time series and cross-sectional dimensions, respectively. In the estimate model, the dependent variable $Y_{i,t}$ is the dividend payout ratio, and the independent variables are represented by $X_{i,t}$. α_i is a constant over time t specific to the individual cross-sectional unit i. The model employed in the present study is based on the model developed by D'Souza (1999) and Amidu and Abor (2006), which explains the association between micro as well as macro-economic determinants and dividend policy. This is illustrated in the following equation:

$$DPR_{it} = \alpha_i + \beta_1 ROA_{it} + \beta_3 LgAGE_{it} + \beta_4 PE_{it} + \beta_5 TAX_{it} + \beta_6 GHS_{it} + \beta_7 INF_{it} + \beta_8 GDP_{it} + \varepsilon_{it} \quad (2)$$

The dependent variable is Dividend Payout Ratio (DPR), while the independent variables are Return on Assets (ROA), Firm Age (LgAGE), Price-to-Earnings Ratio (PE), Corporate Tax (TAX), Government Healthcare Spending (GHS), Inflation (INF), and GDP.

4. Results and Discussion

The descriptive statistics of the ASEAN region are shown in Table 3. It provides the average and standard deviation of each variable used in the research. While taking the ASEAN countries as one group, the minimum and maximum value of DPR varies from 0.00 to 400.00, with an average value of 56.01.

Table 3

Descriptive Statistics

Items		Indonesia	Malaysia	Singapore	Thailand	Vietnam	ASEAN
DPR	Mean	48.35	47.98	58.68	65.69	50.40	56.01
	Std. Dev.	31.40	59.51	30.65	33.43	50.48	42.20
	Min	0.00	0.00	0.00	11.56	0.00	0.00
	Max	108.33	400.00	100.00	209.15	354.43	400.00

Items		Indonesia	Malaysia	Singapore	Thailand	Vietnam	ASEAN
ROA	Mean	11.16	8.40	10.45	11.14	11.81	10.65
	Std. Dev.	7.01	9.88	11.45	8.04	6.44	8.81
LgAGE	Mean	3.87	3.61	3.07	3.52	3.73	3.54
	Std. Dev.	0.32	0.33	0.72	0.40	0.29	0.51
PE	Mean	22.91	37.54	19.92	28.82	15.30	25.24
	Std. Dev.	14.97	58.80	10.28	20.68	6.95	29.13
TAX	Mean	22.92	40.79	22.37	18.42	50.28	29.53
	Std. Dev.	5.86	76.13	10.32	7.03	114.42	59.68
GHS	Mean	1.66	2.11	2.71	3.21	1.65	2.42
	Std. Dev.	0.34	0.19	0.51	0.47	0.33	0.75
INF	Mean	2.89	1.65	2.73	2.84	2.85	2.65
	Std. Dev.	1.03	1.62	2.45	0.53	0.54	1.44
GDP	Mean	3.40	3.01	2.29	5.23	5.15	4.22
	Std. Dev.	2.81	4.62	4.38	2.28	2.28	3.36
N		60	57	59	100	59	320

A dividend payout ratio (DPR) of less than 0% implies that firms continue to pay dividends despite a net loss, while more than 100% DPR indicates that firms pay more dividends than their net profits. The highest DPR among the ASEAN 5 countries is 65.69% in Thailand, followed by Singapore (58.68%), Vietnam (50.40%), Indonesia (48.35%) and Malaysia (47.98%). This implies that healthcare companies in Thailand and Singapore often have more generous dividend polices, which may be a reflection of their stable earning structures and more developed healthcare markets. The average ROA values, which range from 8.40% in Malaysia to 11.81% in Vietnam, show that ASEAN healthcare companies have similar asset utilization efficiency. Vietnam has the highest mean value of ROA (11.81) and TAX (50.28), indicating how efficiently Vietnam's firms utilize their assets to generate profits and pay more tax than other ASEAN countries. LgAGE has comparable mean values across nations, indicating that the sample is primarily made up of well-established healthcare companies rather than young or recently listed businesses. A higher average value (3.87) of LgAGE is obtained in Indonesia. The PE ratio 37.54 has a higher mean value in Malaysia. The average value of GHS (3.21) is the highest in Thailand, followed by Singapore (2.71), indicating more public sector participation in healthcare financial services. Additionally, there is a cross-country heterogeneity in GDP growth and inflation, showing that healthcare enterprises faced different macroeconomic circumstances during research period.

To detect the problem of multicollinearity, the researchers used the Variance Inflation Factor (VIF) test, which presupposes that the VIF coefficient should be less than 5 (Arhinul et al., 2024). The VIF test results exhibit no multicollinearity issues since all values are less than 5.

Table 4

Variance Inflation Factor

Items	Indonesia	Malaysia	Singapore	Thailand	Vietnam	ASEAN
ROA	1.36	1.10	1.15	1.61	2.13	1.07
LgAGE	1.47	1.06	1.12	1.12	1.74	1.08
PE	1.32	1.09	1.32	1.51	1.29	1.06
TAX	1.10	1.12	1.13	1.10	2.10	1.02
GHS	1.20	1.78	4.78	1.29	1.47	1.15
INF	2.06	4.50	2.07	1.49	1.64	1.42
GDP	2.02	4.83	3.18	1.33	1.61	1.45

The present study used the Ordinary Least Square regression approach to attain the objective of the study. The Breusch-Pagan Lagrange Multiplier (LM) test was used to assess the adequacy of pooled OLS vs panel data estimators. The findings demonstrate the statistical significance of the Breusch-Pagan LM test, which suggests that pooled OLS is inconsistent and indicates the existence of considerable panel-level heterogeneity across firms or time. Further, the results of the Hausman test indicate that the random effects model is preferable. The researchers employ White's General Heteroscedasticity test, which shows the absence of heteroscedasticity in the random effects panel model. The value of R-square is 0.232, and the p-value of F-statistics is significant at a 5% significance level, which indicates the overall fitness of the random effects panel model.

The findings of the regression show that all microeconomic variables are statistically significant for ASEAN countries when taken as a group. The coefficient of ROA indicates a positive and substantial relationship with DPR, hence the researchers accept the H_1, which is based on signaling mechanism, which means firms with higher return on assets give positive signals to pay higher dividends and this result is consistent with Tahir et al. (2015), Hutagaol-Martowidjojo et al. (2019), and Angelia and Toni (2020). The results also align with signaling theory and pecking order theory (Al-Najjar, 2011; Le et al., 2019). Moreover, the PE ratio has a favorable substantial effect on DPR, which is consistent with the prior studies (Sharma & Bakshi, 2019; Wijayantini et al., 2022; Mahendra, 2023). This behavior aligns with signaling theory (Bhattacharya, 1980).

Table 5

Regression Results of Pooled ASEAN

Variables	Coefficient
C	-0.377 (0.0796) ***
ROA	0.009 (0.0012)*
LgAGE	0.100 (0.0457)*
PE	0.006 (0.0000)*
TAX	0.001 (0.0000)*
GHS	0.117 (0.0009)*

Variables	Coefficient
INF	0.028 (0.1552)
GDP	-0.019 (0.0263)*
R^2	0.232
Adj. R^2	0.215
Breusch-Pagan LM Test	43.230 (0.0000)
Hausman Test	0.3281
F-Stat.	13.667 (0.000000)*

Note. *, **, ***denote significance at 1%, 5% and 10%. Probability values are shown in parentheses.

The coefficient value (0.100) of LgAGE is positive and significant thus H_2 is accepted. It means that older firms pay more dividends because they have more retained earnings, the life cycle theory also supports this argument (DeAngelo et al., 2006; Baker et al., 2019). The result aligns with the results of Atmaja (2017), Bostanci (2018), and Khan (2021). TAX has a substantial and positive effect on DPR, as expected. This positive relationship was also found by Gill et al. (2010) and Gul et al. (2012). Therefore, the researchers accept H_3. The macroeconomic variables, except INF are also statistically significant. The effect of GHS on DPR is positive and significant. It may be inferred that the financial performance of these countries is improved by increased government expenditure on healthcare. INF has a positive impact, while GDP has a negative impact on DPR. The results of the study are in contrast with the results of various empirical studies (Nadeem et al., 2018; Lotto, 2020; Rinanda, 2022; Muhammad & Kurniasari, 2022). Hence, based on the findings of GDP and GHS represented in Table 5, the researchers accept H_4.

In addition to the above findings, the present study also investigates the effect of selected variables on the dividend payout ratio of the different ASEAN nations as sampled. After that, the Breusch-Pagan LM and the Hausman test are used to identify the best-suited model. The results of the Breusch-Pagan LM test show that pooled OLS is inappropriate. Further, the p-value of the Hausman test is greater than the 5% significance level shown in Table 5, recommending that the random effects model is more appropriate.

Additionally, the diagnostic test was conducted to satisfy the fundamental assumptions of the linear regression model. In order to check the issue of heteroscedasticity in the panel regression, researchers employ White's General Heteroscedasticity, which indicates that there is no heteroscedasticity in panel models.

Table 5 exhibits the results of the random effects model. The value of R-square in Indonesia, Malaysia, Singapore, Thailand and Vietnam is 0.457, 0.618, 0.181, 0.184 and 0.364, respectively. The R-square value indicates how well the independent variables explain variations in the dependent variable. The overall fitness of the model is described by the p-value of F-statistics, which is significant at 5% significance level in all the panels.

From Table 5, it can be seen that ROA has a significant and favorable impact on DPR in Indonesia, Malaysia, Singapore and Vietnam, implying that companies with higher operating performance actively employ dividends to convey financial robustness and future profitability to investors. This finding aligns with the signaling hypothesis as a company is likely to give a signal on its prospects for the future (Le et al., 2019).

Table 6

Regression Results

Variables	Indonesia	Malaysia	Singapore	Thailand	Vietnam
C	-95.633 (0.0472)**	-187.304 (0.0553)***	46.435 (0.2796)	51.021 (0.2005)	27.700 (0.7725)
ROA	2.091 (0.0003)**	0.322 (0.0663)***	0.130 (0.0220)**	-0.679 (0.1750)	0.546 (0.0602)***
LgAGE	20.711 (0.0858)***	42.884 (0.0116)**	2.131 (0.7089)	-5.190 (0.5338)	24.892 (0.0253)**
PE	-0.271 (0.2588)	0.747 (0.000)*	1.142 (0.0114)**	0.444 (0.0196)**	-1.575 (0.0941)***
TAX	0.997 (0.0884)***	0.168 (0.0256)**	0.202 (0.6155)	0.006 (0.9887)	0.207 (0.0054)*
GHS	-0.086 (0.9933)	25.374 (0.4797)	11.086 (0.0538)***	03.115 (0.0801)***	-5.960 (0.7705)
INF	9.593 (0.0369)**	-0.535 (0.9440)	1.940 (0.3976)	9.689 (0.1812)	-14.740 (0.2732)
GDP	-1.165 (0.4754)	-1.607 (0.5229)	0.7913 (0.618)	-1.909 (0.234)	-2.174 (0.4908)
R^2	0.457	0.618	0.181	0.184	0.364
Adj. R^2	0.383	0.564	0.068	0.122	0.277
F-Stat.	6.253 (0.000024)*	11.358 (0.000000)*	1.613 (0.001227)*	2.967 (0.007502)*	4.175 (0.001060)*
Hausman test	0.417	0.106	0.5931	0.4281	1.000
Breusch-Pagan LM Test	12.337 (0.0004)*	26.292 (0.0000)*	15.933 (0.0001)*	44.060 (0.0000)*	4.766 (0.029)*

Note. *, **, ***denote significance at 1%, 5% and 10%. Probability values are shown in parentheses.

Signaling theory is the primary factor driving dividend distributions in the ASEAN healthcare sector, notably in Indonesia, Malaysia, Singapore and Vietnam. During data analysis, we found that many companies continue to pay dividends even when they experience a net loss. Several researchers, such as Tahir et al. (2015), Hutagaol-Martowidjojo et al. (2019), Angelia and Toni (2020), and Lestari et al. (2021), also conclude that return on asset is a substantial factor for dividend policy. The PE ratio evidence is diverse among nations, since PE ratio has an insignificant and negative impact on the DPR only in the case of Indonesia, whereas it has a significant positive impact on DPR in Malay-

sia, Singapore and Thailand. High valuation businesses are able to maintain dividend payments without sacrificing growth in Malaysia, Singapore and Thailand—countries with wider capital markets and more sophisticated investors—reinforcing the signaling importance of dividends. The positive effect depicts that more dividend payments are linked with higher stock values (Nerviana, 2015; Khan et al., 2016; Sharma &Bakshi, 2019). Signaling theory also exhibits that companies with high valuation use dividend payments as a signal to inform the market of their stability and strength (Bhattacharya, 1980). The results align with the previous studies (Nerviana, 2015; Khan et al., 2016; Sharma & Bakshi, 2019; Wijayantini et al., 2022; Mahendra, 2023). However, the unfavorable influence on DPR in Vietnam implies that high growth companies might value reinvestment ahead of rewards, suggesting a trade-off between development prospects and signaling in less developed markets.

Table 5 also demonstrates that there is a favorable and substantial relationship between LgAGE and DPR in Indonesia, Malaysia, Singapore and Vietnam. This favorable relationship in Indonesia, Singapore, Malaysia and Vietnam supports the agency cost and life-cycle theories of dividend policy. The life cycle theory states that as a company becomes older, its capacity to generate profits surpasses its lucrative investment possibilities (DeAngelo et al., 2006; Baker et al., 2019). The result is in line with the various empirical studies (Atmaja, 2017; Sari, 2018; Bostanci, 2018; Khan, 2021). In Thailand, the effect of LgAGE is negative and insignificant on DPR, which suggests that alternative governance measures such as more robust legislative frameworks, improved transparency requirements and more efficient investor protection are being used to reduce agency conflicts. The dividend policy is not as crucial in mitigating agency issues in these institutional systems.

Table 5 also indicates that the impact of TAX on DPR is positive and significant only in Indonesia, Malaysia and Vietnam. This relationship is coroborated by the agency cost theory and tax-induced dividend preference theory, which contend that higher taxes induce companies to raise dividends to lower taxable income and agency costs (Jensen & Meckling, 1976; Easterbook, 1984; Feldstein & Green, 1983). Several researchers also investigated a favorable relationship between TAX and DPR (Amidu & Abor, 2006; Gill et al., 2010; Gul et al., 2012). Additionally, the impact of GHS on DPR is favorable and substantial in Singapore and Thailand. This demonstrates the importance of policy-induced income stability in influencing dividend decisions. These nations' healthcare systems are distinguished by strong public––private integration, transparent reimbursement methods and consistent government support. Higher public healthcare spending minimizes demand volatility and stabilizes cash flows, reducing agency conflicts. This outcome aligns with agency theory, which suggests that enhanced macroeconomic circumstances minimize ambiguity and agency conflicts (Jensen & Meckling, 1976). Government healthcare spending is also the highest in Singapore and Thailand. It is expected that higher government spending on healthcare in these nations improves

the financial performance and stability of the healthcare industry, which in turn allows businesses to pay out larger dividends to shareholders.

GDP is negative and insignificant for the 5 ASEAN countries except Singapore. The above results are contradictory to the findings of Nadeem et al. (2018), Lotto (2020), Romus et al. (2020) and Silalahi et al. (2021). The INF proxy of inflation has a substantial and favorable effect on DPR exclusively in Indonesia. However, these findings contrast with Rinanda (2022) and Muhammad and Kurniasari (2022). These results suggest that economic development does not always result in larger dividend payments. This might be because businesses choose to reinvest their earnings for future growth during periods of economic expansion. The expected and actual signs are exhibited in Table 7.

Table 7

Expected and Actual Results

Variables	Expected Results	Actual Results				
		Indonesia	Malaysia	Singapore	Thailand	Vietnam
ROA	+	+	+	+	-	+
LgAGE	+	+	+	+	-	+
PE	+	-	+	+	+	-
TAX	+	+	+	+	+	+
GHS	+	-	+	+	+	-
INF	-	+	-	+	+	-
GDP	+	-	-	+	-	-

Robsutness Check

We use the Generalised Method of Moment of the Arellano-Bond to address the issue of endogeneity. Since present dividend distributions can affect future profitability and corporate behavior, dividend policy decisions may be endogenous to macroeconomic conditions and firm performance. The initial panel regression results are substantially supported by the GMM estimate results. The primary findings are mostly consistent with the signs, magnitudes and significance levels of important explanatory variables, suggesting that endogeneity is not the driving force behind the associations observed in the initial model. This consistency implies that even after taking into account dynamic changes in dividend policy, the major economic mechanisms—such as signaling effects, agency cost consideration and the macroeconomic conditions—remain robust.

Additionally, the reliability and validity of GMM estimation is supported by the Arellano-Bond test, which confirms the absence of second order serial correlation. However, the p-value of Hansen J-statistic supports the validity and appropriateness of the instrumental variables employed in the model (Arellano & Bond, 1991; Hampl & Vagnerova Linnertova, 2025). Overall, the GMM-based robustness analysis increases confidence in the study's empirical findings.

Table 8

Generalized Method of Moment Robustness Check Results

Variables	Coefficient
C	-9.207 (0.4699)
ROA	1.926 (0.0001)*
LgAGE	0.463 (0.0040)*
PE	0.612 (0.0000)*
TAX	1.718 (0.3407)
GHS	-1.822 (0.0046)*
INF	0.180 (0.0035)*
GDP	13.085 (0.0001)*
R^2	0.329
Adj. R^2	0.312
Hansen J-Stat. (p-value)	0.1030440
AR(1)	-0.295(0.0478)
AR(2)	0.428(0.6685)

Note. *, **, ***denote significance at 1%, 5% and 10%. The probability values are shown in parentheses.

5. Conclusion and Recommendations

The present research fills the gap in the literature by examining the micro and macroeconomic variables influencing the dividend policy of the healthcare sector in 5 ASEAN countries over the period of 2019–2023. The researchers used Pooled OLS regression with a random effects model. The results show that the impact of INF on the DPR of ASEAN countries is significant only in Indonesia, and GDP is insignificant for all 5 ASEAN nations. In addition to these macroeconomic variables, GHS is substantial for Singapore and Thailand. ROA has a favorable and significant impact on DPR in Indonesia, Malaysia, Singapore and Vietnam. That means profitable firms are more likely to pay dividends. The result also shows that the influence of LgAGE is positive on DPR in 5 ASEAN countries except Thailand, whereas PE ratio is significant for 5 ASEAN nations except Indonesia. Further, the impact of TAX on DPR is favorable for those 5 ASEAN countries but significant in Indonesia, Malaysia and Vietnam. The result of 5 ASEAN countries taken as a whole sample indicates that all the micro and macroeconomic variables, except INF, are substantial for the dividend policy of the healthcare sector of ASEAN nations.

Practical Implications

The present research is advantageous to policymakers and financial managers of the healthcare sector of the ASEAN nations by providing insights into important aspects that significantly affect dividend policies. It may also help investors to make accurate

investment decisions by informing them about the financial dynamics of the healthcare sector in 5 ASEAN countries. A stable and supportive macroeconomic climate, headed by government healthcare expenditure, draws both domestic and international investment. The findings show that return on assets and return on equity are the most significant determinants for all 5 ASEAN countries. To entice investors and demonstrate their financial stability, companies may use consistence or increasing dividends. The results also emphasize the role of corporate tax in shaping dividend policy. Therefore, the present study is also beneficial to the governments of ASEAN countries, who may use this insight to design tax policies that incentivize corporate investments. In order to boost the performance of the healthcare sector, governments ought to encourage partnerships with healthcare organizations.

Limitations

Despite its contributions, this study has certain drawbacks that should be noted. First, the analysis is limited to the healthcare sector in five ASEAN nations. While this sectoral emphasis provides deeper insights on dividend behavior in a socially and economically significant business, the findings may not be immediately applicable to other sectors. The present study aims to analyze the determinants of dividend policy in the healthcare sector of ASEAN nations. Future research can be carried out in other sectors of ASEAN countries. The study spans a short time, from 2019 to 2023, and although this era includes an economically significant phase, such as COVID-19 epidemic and subsequent recovery, it may restrict the capacity to examine long-term dividend trends across business cycle. Future research should broaden the temporal range to investigate the stability of dividend drivers over longer periods. Subsequent studies are suggested to investigate more variables than the present study has investigated. They can also include other country-specific determinants such as interest rate, exchange rate, etc. Future researchers may also examine the role of corporate governance attributes in shaping the dividend policies in the different sectors to fill the gap of the present study.

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