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The Impact of Ownership Structure on Firms' Dividend Policy: Evidence from JSE Listed Firms

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Abstract: This study examines the impact of ownership structures on dividend policy for 89 firms listed on the Johannesburg Stock Exchange All Share Index (ALSI) from 2010 to 2019. To achieve this objective, three ownership structures were examined; the study employs a panel regression model to investigate this relationship incorporating both the fixed effects (FE) and random effects (RE) models. First, our result revealed that ownership is concentrated with institutional shareholders. Second, our FE model results show that managerial and foreign ownership structure has no relationship with firms' dividend policy. In contrast, the result shows a negative relationship between institutional ownership and dividend policy of firms in South Africa. Additionally, firm size and profitability have a positive relationship with the dividend policy. The South African ownership structure context is contrary to the agency theory where large shareholders use increase in dividend pay-out to reduce available earnings for the benefit of managers. It is evident from the results that institutional investors are active monitors of managers' performances. This study is the first in South Africa to the author's knowledge. Lastly, this study proffers key insight into the impact of ownership structures on dividend pay-out for investors seeking to invest in JSE stocks.

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Introduction

The main corporate goal of publicly listed firms is to maximize shareholders' wealth (Akhalumeh & Ogunkuade, 2021). Shareholders are the owners of firms, purchasing units of shares in a firm to increase their wealth through either dividend, share appreciation, or both (Gordon, 1959). Dividends are the rewards to shareholders for their investments and risk-bearing in a firm (Hanady, 2021; Kouki & Guizani, 2009). Dividend policy is one of the most strategic decisions taken by firm managers (Sinnarajah, 2020). Dividend pay-out decisions are usually long-term in nature, which affect the future value of a firm (Firer, Gilbert & Maytham, 2008).

Dividend policy is defined as the guidelines firms' managers use to decide how much of the profits earned is dividend pay-out to shareholders as dividends (Firer & Viviers, 2011). The dividend policy indicates how much dividends should be distributed to shareholders. In a corporate organisation, managers are the agents, making decisions on behalf of shareholders (Jensen, 1986). For shareholders, dividend pay-out decisions provide returns on shareholders' investments (Kien & Chen, 2020). On the other hand, dividend pay-out reduces profits availability for firm growth (Hanady, 2021). Also, dividend pay-out plays an important role in reducing agency conflicts between managers and shareholders (Jensen, 1986; Sinnarajah, 2020). While, managers tend to prefer retaining profits for their own personal benefits than distribute the profits as dividends to shareholders because, payment of dividends reduces the profits available for the managers, thus giving rise to agency problems (Sinnarajah, 2020). As a result, dividend policy is a sensitive subject for firm managers and shareholders. The managers have to strike a balance between the ratio of profit to share as dividends to maintain shareholders' trust and keep as retained earnings for firm expansion (Hanady, 2021). The objective of the study is to examine the impact of ownership structure on dividend policy for JSE listed firms in South Africa.

Miller and Modigliani (1961) suggest that shareholders are indifferent to firms' dividend policy since they could sell portions of their equity ownership in firms for cash with stock price appreciation (Firer et al., 2008). However, decisions by firms on whether to pay dividends or not also impact potential and existing investors' perceptions, which influences their investment decisions (Ullah, Fida, & HKhan, 2012). Dividend policy may vary across jurisdictions, especially between developed and emerging markets (Ang, Cole & Lin, 2000; Chai, 2010; Eskandar, Mehrani, & Moradi, 2011). Empirical findings from existing studies across jurisdictions have not been unified. Also, institutional and regulatory factors, level of capital market

developments, nature of ownership structures may affect empirical findings in studies from developed and emerging economies (Björn & Eriksson, 2016; Kien & Chen, 2020).

For instance, ownership in firms in the developed economies is widely dispersed, while in emerging economies, ownership is highly concentrated, especially among family-owned, institutional, or state ownership, where shareholders could pressure managers for dividend pay-out Yet, dividend pay-out ratio in firms with multiple large shareholders is higher in Europe and lower in Asia with ownership concentration (Kouki & Guizani, 2009). Firms with widely dispersed shareholders may not have sufficient voting power alone or collectively to influence managers' decisions on dividend policy due to different shareholders' interests (Björn & Eriksson, 2016). According to Ngo, Duong, Nguyen, and Nguyen (2020), market forces influence managers' decisions for dividend pay-out to retain and attract investors in the United States of America. However, firms such as Facebook, Google, and Amazon in the United States, they are yet to pay dividends to date, choosing to retain earnings for growth (Moloi, Nharo & Hlobo, 2021), yet their stocks are performing and well traded with market domination.

In the emerging market, where ownership is highly concentrated, Kien and Chen (2020) find that dividend pay-out is higher for Vietnamese government-controlled firms. But other studies from the emerging economies, such as (Hanady, 2021; Mvovo, 2020), find no evidence of family-owned, institutional ownership, and state ownership having a significant impact on dividend pay-out. Extensive studies (Akhalumeh & Ogunkuade, 2021; Björn & Eriksson, 2016; Hanady, 2021; Kouki & Guizani, 2009) are still carried out because of the continued existence of agency problems such as the Enron scandal of 2001, the 2008 global financial crises, Steinhoff scandal of 2017 in South Africa, bank failures, among others often leading to loss of shareholders wealth invested (Moloi et al., 2021). Hence, the impact of ownership structures on the dividend policy of firms remains unresolved, especially in emerging economies. Thus, the relevance of the study.

South Africa has the most developed financial market in Africa (Mvovo, 2020). The Johannesburg Stock Exchange was established in 1887, and it is the largest stock exchange in Africa and one of the top 20 exchanges in the world (JSE, 2021). It provides a platform for companies' shares to be bought and sold by investors. JSE is the major channel for ownership of companies in South Africa, providing a secure market for trading, clearing, and settlement systems, including fully automated (JSE, 2021). A number of studies from South Africa (Moloi et al., 2021; Mvovo, 2020; Nyere & Wesson, 2019) have examined the relationship between dividend policy and one aspect of ownership structure, such as institutional ownership, segregation of institutional ownership, board size, board diversity, and composition. Little is

known about the influence the different ownership structures have on dividend policies in South Africa.

There are different ownership regulations in South Africa, such as the Broad-based Black Economic Empowerment (B-BBEE), women shareholdings, exchange controls on foreign ownership (National Treasury, 2017; Pequenino, 2018). The B-BBEE is designed for previously disadvantaged blacks South Africans to own about 15 percent of firms in South Africa to redress the income gap created during the apartheid era for inclusive growth (National Treasury, 2017). The exchange control regulation since 1961 does not restrict foreigners from investing in firms in South Africa. However, the extent of foreign ownership in firms may affect such firms borrowing ability in South Africa (Levin, 1997). The relaxation on exchange controls on foreign ownership and strong regulatory framework for investors protection as resulted in a continued rise in foreign ownership in JSE listed firms (National Treasury, 2017).

These regulations of ownership restructuring change the dynamics of ownership structures in South African firms may lead to a shift in investors' preferences for dividend pay-out, thus affecting the dividend policy of firms. According to Pequenino (2018), the BEE investors may put additional pressure on firms to adopt more dividend pay-out. There is a lack of empirical evidence on the impact of ownership structure on dividend policy on firms listed in the largest stock exchange in Africa. To the best of the authors' knowledge, there has not been any research that examines this relationship in South Africa. Therefore, this study examines the impact of ownership structures on dividend policy for listed firms on the JSE in South Africa. This study uses sample data of firms included in the Johannesburg Stock Exchange All Share Index (JSE ALSI) to achieve this objective. This study adds to existing literature to understand the peculiarities of different ownership structures in the JSE. This study is also relevant because the Covid-19 pandemic has caused a global shift from investing in growth stocks to value stocks. Foreign investors seek to invest in firms that performed better in which some South African firms are benefitting from (Buthelezi, 2021). According to Buthelezi (2021), South African firms performed better than initially anticipated as other economies grabble with the effect of the covid-19 pandemic. This study will be beneficial to investors seeking to invest in JSE stocks as it proffers key insight into the impact of ownership structures on dividend policy in South Africa.

2. Theoretical and Literature Review

2.1. Theoretical review

There are different theories concerning dividend policies, such as Dividend relevance by Gordon (1959), stating that dividend is relevant to investors in an imperfect market. Dividend irrelevance theory by Miller and Modigliani (1961) that in a perfect market with rational investors and perfect conditions, dividend is irrelevant. A bird-in-hand theory also supporting dividend relevance that shareholders prefer dividend pay-out rather than share appreciation (Gordon, 1959). Agency theory (Jensen, 1986). Signalling theory by Ross (1977). The two competing theories for this study are agency and signaling theory. Dividend policies are thought to play a vital role in reducing agency costs, examined in the agency theory. Furthermore, dividends are also assumed to play a role in signaling a firms' performance, which is explained by the signaling theory. The two relevant theories are discussed further below.

2.1.1. Agency Theory

Agency Theory explains the relationship between a principal (owner) and agent (manager), where both parties are driven by self-interest with different priorities (Sherman, 2020). The separation of ownership from management can result in conflict of interest and asymmetry of information between principal and agent, which creates potential agency problems (Eskandar et al., 2011; Firer et al., 2008).

Conflict of interest arises from instances like when a firm has increased cash flows; managers tend to use it to pursue investment of their choice or for their own benefit, affecting dividend pay-out to shareholders (Moloi et al., 2021). These agency problems give rise to agency costs incurred by shareholders to monitor the managers' behaviours in ensuring that agents have less resources for their self-interests (Firer et al., 2008; Jensen, 1986). Active monitoring of the agents ensures there is no conflict of interest between shareholders and the managers can be costly. In contrast, dividend pay-out provides shareholders with indirect control tools in the absence of active monitoring of managers to reduce agency costs (Chai, 2010; Easterbrook, 1984). The dividend pay-out reduces free cash flows available for managers' control.

Despite the agency theory arguments on dividend as a control, dividend pay-out causes conflict as managers are more likely to prefer retaining funds instead of paying dividends (Firer et al., 2008; Jensen, 1986). In addition, dividend pay-out deprives firms of some cash flows that would otherwise be re-invested into the firm for business expansion and growth (Firer et al., 2008). Based on the agency theory, it is expected that ownership structure can positively or negatively impact the dividend policies of listed firms in South Africa.

2.1.2. Signalling Theory

Signalling theory developed by Ross (1977) assumes that announcements in dividend policy change positively correlate with firms' share prices changes (Ngo et al., 2020). An increase or decrease in dividend pay-out sends good or bad signals of a firm to the capital market (Ullah et al., 2012). The signaling theory thrives because of the asymmetry of information between agent and principal, where managers have more information advantages than the investors about why the dividends have changed (Firer et al., 2008). Therefore, managers can use announcements of changes in dividend policy to pass on information or signal future prospects of the firm to shareholders (Firer et al., 2008; Ullah et al., 2012). But investors receiving these announcements must determine their credibility (Firer et al., 2008).

Miller and Modigliani (1961) argue that a firm's market value is not affected by its dividend policy in a perfect market. Thus, suggesting that dividend pay-out cannot be used as a signal about the future profitability of the firm. Other prior studies such as Björn and Eriksson (2016) contradicted the dividend irrelevance theory stating that dividends are a strong indicator of a firm's future. Therefore, supporting the signalling theory that a change in dividend policy works as a signal to investors in the capital market about a firm's future (Ngo et. al., 2020). Also, it will be difficult for managers in struggling firms to announce dividend as a false signal of future prospects (Akhalumeh & Ogunkuade, 2021; Firer et al., 2008). Furthermore, according to Lintner (1956), that firms may be reluctant to change their dividend policy unless they are confident, they will sustain it into the future. The implication of this findings provide that profitable firms pay dividends to signal good performance to attract potential investors. This may suggest that there are other factors than ownership structures impacting on dividend policy of firms.

2.3. Literature Review

Ownership structure impact dividend policies of firms differently, either positively or negatively (Hanady, 2021). Hence, there is no consensus in the literature on the impact of ownership structure on dividend policy of firms. Managers' behaviour and decisions towards dividend policy may be different based on the composition of ownership structures in their firms (Eskandar et. al., 2011). For instance, a sole proprietorship firm where ownership and management are fused into one party may behave differently in maximising firm value than firms with separated ownership and management (Björn & Eriksson, 2016). The separation of ownership from management usually results in conflict of interest, leading to agency problems (Ang et al., 2000; Firer et al., 2008). From the foregoing, this study focus is on listed firms where ownership and management are separated. There are different ownership structures for listed firms, such as institutional ownership, managerial ownership, state ownership, and foreign ownership (Björn & Eriksson, 2016; Hanady, 2021).

This section presents a discussion on empirical literature for different ownership structures, hypothesis developments on three ownership structure; also present discussion on other factors influence on dividend policy of firms.

2.3.1. Ownership Structure and Dividend Policy

Dividend policy has been a major subject in corporate finance literature for many decades (Nyere & Wesson, 2019). Decisions to pay or not to pay dividend are complex in reality (Hanady, 2021; Moloi et al., 2021). Some empirical studies (Chai, 2010; Eskandar et al., 2011; Kien & Chen, 2020; Pequenino, 2018) have examined the nature and composition of ownership structures affecting dividend policy (Kien & Chen, 2020; Shah, Ullah, & Hasnain, 2011). Yet, agency problem has not been resolved. For instance, large shareholders, especially financial institutions, prefer cash dividends (Chai, 2010). So managers' decisions are influenced by these shareholders to align their interests to maximise returns on their shareholdings (Kien & Chen, 2020). This influence is usually achieved in firms where there is high ownership concentration. However, firms with widely dispersed shareholders may not have sufficient voting power alone or collectively to influence managers' decisions on dividend policy due to different shareholders' interests (Björn & Eriksson, 2016). Firms' ownership comprises institutions, foreign investors that can also be institutions, government, and individuals.

Institutional ownership is large investors from institutions such as pension funds, banks, and insurance companies (Eskandar et. al., 2011). These institutions get funds from individuals, put them into a pool, and invest the funds on their behalf (Mvovo, 2020). Institutional ownership is one of the most shareholders in the world (Mvovo, 2020). In Sweden, institutional investors own over 85 percent of shares in firms (Björn & Eriksson, 2016). Institutional investors can monitor managers' performance, which reduces agency costs and the need for higher dividend payments (Eskandar et al., 2011; Kien & Chen, 2020). In this context, a negative relationship is expected between institutional investors and dividend policy. In contrast, high institutional investors in firms are able to better force managers to increase dividend pay-out (Suwaidan & Khalaf, 2020). Thus, a positive and significant relationship is expected between institutional ownership and dividend policy. This view is supported by Ang et al. (2000) that institutional owners usually require higher dividend pay-outs, especially if they cannot monitor manager's performance. Therefore, theoretically, the dividend payments' expectation will depend mostly on whether institutional investors can monitor managers' performance.

Some studies find a positive relationship between institutional ownership and dividend policy. Björn and Eriksson (2016) find a positive relationship between institutional ownership and dividend policy for Swedish firms. Suwaidan and Khalaf (2020) find a positive and significant relationship between dividend pay-out and

Jordanian firms with higher institutional ownership. Ullah et al. (2012) find a positive and significant relationship between institutional ownership and dividend policy for Pakistani firms. Contrary, studies such as Eskandar et al. (2011) for Iranian firms Sinnarajah (2020) for Sri Lanka firms find that institutional ownership negatively impacts dividend pay-out of firms. Other studies such as Al-Gharaibeh, Zurigat, and Al-Harahsheh (2013) for Jordanian firms; Kouki and Guizani (2009) for Tunisian firms find that institutional ownership has a negative and significant relationship on dividend pay-out.

These studies with negative relationship for institutional ownership on dividend policy are contrary to the agency theory view that large shareholders use dividend pay-out to monitor managers' behaviour (Chai, 2010). Moreover, studies with negative relationships assume that institutional shareholders monitor managers' performances, hence require lower dividends (Björn & Eriksson, 2016). This is because institutional shareholders are better at monitoring the firm's performance, which reduces agency costs (Pound & Zeckhauser, 1990). This suggests that institutional shareholders may prefer that managers pay-out lower dividends. In this context, this study formulates the first hypothesis as:

H_1: There is a negative relationship between institutional investors and the dividend pay-out

Managerial ownership involves the firm's managers, who are also shareholders within the firms they manage. Agency costs tend to be lower for firms with a high managerial ownership structure (Ang et al., 2000). They usually incur less monitoring costs because there is less chance of having information asymmetry (Mustapha & Che Ahmad, 2011)**.** But, Jensen (1986) contends that managers would rather retain firms' earnings to enhance their growth than pay it out as dividend. So, dividend pay-out decreases as managerial ownership increases. From the empirical studies reviewed that included managerial ownership, some strands of literature, such as (Akhalumeh & Ogunkuade, 2021; Eskandar et. al., 2011), find an insignificant relationship between managerial ownership and dividend policy. Akhalumeh and Ogunkuade (2021) examine the impact of managerial ownership and ownership concentration on dividend pay-out in listed non-financial firms in Nigeria for the period of 2012 and 2018. Using OLS pooled regression and controlling for firm size, the study finds negative but insignificant for managerial ownership on dividend pay-out. Furthermore, Eskandar et al. (2011) employ four different regression models to examine the relationship between dividend policy and ownership structures for Iranian listed firms over the period between 2000 and 2007. Their study find no significant relationship between managerial ownership and dividend pay-out reduces. Ezeagba (2017) also reports no relationship between managerial ownership and dividend policy for 27 firms listed on the Nigerian Stock Exchange.

In contrast, other strands of literature held that managerial ownership has a significant relationship on dividend policy (Al-Gharaibeh et al., 2013; Shah et al., 2011; Ullah et al., 2012). Shah et al. (2011) examine the impact of ownership structure on dividend policy of firms in Pakistan listed on the Karachi Stock Exchange (KSE) between 2002 and 2006. Using fixed effect model, the results find a significant and positive relationship between managerial ownership and dividend pay-out. However, a similar study by Ullah et al. (2012) from Pakistan with a more sample period between 2003 and 2010 reports a negative and significant relationship between managerial ownership and dividend policy. Manager-owned firms, especially firms in emerging economies, may use dividend pay-out to signal a well-performing firm to attract potential investors from foreign markets (Booth & Zhou, 2017; Joliet & Muller, 2015). Since South Africa is an emerging economy, this study hypothesise as follows:

H_2: There is a positive relationship between managerial shareholders and the dividend pay-out

Foreign ownership occurs when foreigners invest in local firms (Eskandar et al., 2011). Since foreign owners are not in the vicinity of the firm they own shares in, they are less able to monitor managers' activities, leading to increased agency costs. According to Easterbrook (1984), a firm's dividend policy has an essential role in reducing agency costs from conflicts between the managers and shareholders. Paying out dividends is expected to reduce cash flows the managers have under their control. When there are fewer resources at the managers' control, there will not be a need to monitor managers activities, leading to reduced agency costs. Some studies (Chai, 2010; Ullah et. al., 2012) state that foreign ownership positively impacts dividend pay-out.

Chai (2010) examines the relationship between dividends and foreign ownership for non-financial firms listed on the Korean Stock exchange for the period of 1998 and 2003. Using Tobit and Logit regression, the study finds a positive relationship between foreign ownership and level of dividend pay-out. The study stated that dividend pay-out in Korean firms increases as foreign shareholdings increase (Chai, 2010). In the same context, using stepwise regression, Ullah et al. (2012) Le and Le (2017) find that Vietnamese firms with large foreign ownership increase dividend pay-out than firms with local investors. Studies with positive findings agree with the agency theory that foreign ownership use dividend pay-out to reduce agency costs.

Alternatively, an increase in foreign ownership tends to reduce agency costs because the presence of foreign investors in a local firm increases the interests of foreign analysts in such a firm (Björn & Eriksson, 2016). These analysts demand transparency in management decisions. This increases the active monitoring of such firms, which reduces agency costs (Hanady, 2021). A decrease in agency costs leads to a decrease in dividend pay-out. For instance, Al-Najjar and Kilincarslan (2016)

examine the impact of ownership structure on the dividend policy of listed firms in Turkey. Using dividend pay-out and dividend yield as a measure of dividend policy, the study finds that foreign ownership has a negative impact on dividend pay-out. In jurisdictions with poor regulations and inadequate corporate governance, foreign investors prefer to increase dividend pay-out or increase the demand for disclosure of all activities, reducing agency costs (Kien & Chen, 2020; Le & Le, 2017). But, South Africa has strong regulations and a corporate governance framework that protect investors (Moloi et al., 2021), so the presence of foreign ownership may not increase active monitoring. According to Ullah et al. (2012), a positive relationship is anticipated between dividend pay-out and foreign ownership because foreign investors can not directly check managers' performance; therefore, dividends signal good performance and reduce agency costs. In this context, this study formulates the third hypothesis as:

H_3: There is positive relationship between foreign investors and the dividend pay-out

2.3.2. Other Factors

Firm characteristics also affect the dividend pay-out decisions of firms (Shah et al., 2011). Other factors such as firm size, profitability, cost of raising new equity, investment opportunities, taxes on dividends contribute to large variation in results of empirical studies on dividend policies (Eskandar et al., 2011; Ngo et al., 2020). For instance, Booth and Zhou (2017) selected a review of literature from different countries, its findings show that firm characteristics such as firm size and profitability have a significant effect on firms' decisions to pay dividend in European countries.

According to Redding (1997), large firms pay more dividends while small firms choose not to pay dividends and re-invest in the business. A large firm may have more resources to generate more cash inflow, leading to a high dividend payment. Studies on the relationship between ownership structure and dividend pay-out, such as Eskandar et al. (2011); Shah et al. (2011); Ullah et al. (2012), use firm size as a control variable. Eskandar et al. (2011) find a positive relationship between firm size and dividend pay-out. Their study shows that larger firms increase dividend pay-outs to decrease agency costs and to pacify shareholders. Therefore, this study includes firm size as a control variable.

Furthermore, firms use debts to reduce agency costs. In this context, a firm with more loans to pay will have lower dividend pay-outs to its shareholders. According to Jensen (1986), debt can work as a monitoring mechanism, reducing the need for higher dividend pay-out. Eskandar et al. (2011) use leverage as a control variable when examining the relationship between ownership structure and dividend pay-out. The expectation is that as the leverage ratio increases, the firm will reduce dividend

payments. Thus, a negative relationship is expected between the leverage of a firm and its dividend policy.

Firms' profitability influences the dividend policy of the firm (Nyere & Wesson, 2019). The assumption is that the more profitable a firm is, the more dividends it is expected to pay out. Hanady (2021) finds a positive impact of firm profitability on dividend pay-out for Jordanian firms, while Ngo et al. (2020) find a negative relationship for US firms. According to Ngo et al. (2020), the market forces expect the US firms to pay dividends to attract potential investors, even though they have financing deficits because dividend payment signals good performance to investors in the market.

In summary, it can be observed that firms with different types of ownership structures have different preferences on dividend pay-out decisions. It is also evident from the empirical findings discussed that there are contradicting results on the relationship between the different ownership structures and dividends. To the author's knowledge, there have not been any empirical studies that have been previously conducted on this topic in the South African literature. This difference in results warrants the study of this relationship amongst firms listed on the JSE in South Africa.

3. Methodology

The study's objective is to investigate the impact of ownership structure on the dividend policy of firms listed on the Johannesburg Stock Exchange (JSE). Thus, the target population consists of all listed firms on JSE for which ownership structure and financial data are publicly available. The secondary data on South African listed firms for this study is sourced from Standard & Poor Capital IQ, firms' financial statements, and Bloomberg online database. The sample consists of 164 firms falling under the JSE All Share Index (ALSI) in 2019. The sample period for this study is ten years, from 2010 to 2019. This study allows for attrition in the observations by including firms listed or delisted during the sample period eliminating survivorship bias. Survivorship bias occurs when the data set only consists of firms that have continuously been listed throughout the period; in other words, survivors, excluding those that delisted during the period (Gilbert & Strugnell, 2010).

For this reason, the data represent an unbalanced panel of firms since there is attrition in the sample. Furthermore, firms that did not make dividend payments during the period were eliminated from the sample. Additionally, firms in the financial sector are excluded because their financial structure is different from that of non-financial firms; they also follow different investment and dividend policies (Ullah et al., 2012). After eliminating firms that do not pay dividends and those in the financial sector, the final sample size is 89 firms in the JSE ALSI.

Estimation model for ownership structure and dividend policy

This study follows a similar model by Kouki and Guizani (2009) and Suwaidan and Khalaf (2020). To empirically investigate the impact of ownership structure on dividend policy of listed firms in South Africa, the linear panel model is estimated as follows:

Model 1:

$$Div_{it} = \beta_1 + \beta_2 MOS_{It} + \beta_3 IOS_{it} + \beta_4 FOS_{it} + \beta_5 In\_FS_{it} + \beta_6 LV_{it} + \beta_7 PR_{it} + \mu_{it} \quad (1)$$

Where,

Div is the dependent variable defined as dividend pay-out of firm *i* in time *t*. *MOS* is managerial ownership, *IOS* is institutional ownership, *FOS* represents foreign ownership. The study includes three control variables: *In_FS*, *LV*, *PR*. *In_FS* represents firm size, *LV* represents leverage. *PR* represents the profitability ratio. The error term is μ. Furthermore, the βs are the coefficients for all the variables. The key variables in equation 1 are explained in section 3.2.

3.2. Key Variables measurements

The dependent variable is dividend pay-out (*Div*). Most JSE listed firms' ownership composition are institutional, foreign, managerial, and B-BBEE shareholdings. However, there is yet to be data uniformity in assessing black ownership through the B-BBEE structures (National Treasury, 2017). Therefore, this study focuses on three compositions of ownership for firms in the JSE ALSI. The three ownership structures are managerial ownership as *MOS*, institutional ownership as *IOS*, and foreign ownership as *FOS*.

MOS is managerial ownership calculated as the percentage of shares owned by executives, managers, and directors over the firm's total outstanding shares. Institutional ownership (*IOS)* is defined as the percentage of shares owned by institutions over the firm's total outstanding shares. Foreign ownership (*FOS)*, as the percentage of shares owned by foreign investors, including foreign institutional investors divided by the total outstanding number of shares.

Control variables

In equation 1, the model control for firm-specific characteristics that may affect dividend policy of firms. First, firm size proxy by *ln_FS is* measured as the log of market capitalization. It is expected that firm size to positively impact the dividend pay-out. The model also includes leverage proxy by *LV* measured as debt-to-equity ratio. The expectation is that as the leverage ratio increases, the firm reduces dividend payment. Finally, the model includes profitability ratio proxy by *PR*

measured as return on asset (ROA). The higher a firm's profitability, it is expected that the higher the dividend pay-out. The control variables are added because ownership structure is not the only factor affecting a firm's dividend policy.

Equation 1 is a panel regression model and is analysed using fixed effect model (FE) and random effect model (RE). Panel data models employ either RE or FE models for data analysis depending on the unobserved individual heterogeneity. FE and RE models allow longitudinal data to have more variability and explore more issues than cross-sectional and time-series data used alone (Baltagi, 2008). RE and FE are used in the empirical such as Shah et al. (2011).

Specification test for the econometric model

The Hausman test is used to determine the appropriate model between RE and FE. The hypothesis for the Hausman test, the null hypothesis (H_0) RE, is preferred. The alternative hypothesis (H_1) FE is preferred. If the p-value of the Hausman test is greater than 1% and 5% significance levels, H_0 cannot be rejected, and the conclusion is that the RE model is appropriate for equation 1. Alternatively, H_0 will be rejected in favor of H_1, and the conclusion is that the FE model is appropriate.

4. Results and Discussion

The objective of the study was to examine the impact of ownership structure on dividend policy. This section presents descriptive statistics of key variables, specification tests, regression analysis for FE model, interpretation of the regression analysis, and the discussion of the results. The dependent variable is Div**,** while the independent variables are MOS, IOS, FOS, In_FS, Lev, and PR.

4.1 Descriptive Statistics

Table 1 presents the summary statistics of key variables for the study sample of 89 firms listed on the JSE. The Dividend payout (Div) averages 43.64 percent over the sample period, while the standard deviation (sd) is 29.5 percent. This indicates a high dividend payout, suggesting that South African listed firms payout on the average 43.6 percent of their earnings to shareholders. In addition, some firms pay out a dividend of over 85 percent of their earnings as reported with a maximum (max) value of 86.36 percent. Our result shows that South African firms' average dividend payout is higher than firms from other emerging economies. This is evidenced by the empirical literature such as Suwaidan and Khalaf (2020) for Jordanian firms of 7 percent, Sinnarajah (2020) for Sri Lanka firms of 5 percent and Kouki and Guizani (2009) for Tunisian firms of 1.3 percent. In addition, the average dividend pay-out for South African firms is higher than dividend pay-out from listed firms in the

developed countries, such as Ngo et al. (2020) for United States dividend-paying firms of 35 percent.

On the independent variables, the managerial ownership (MOS) shows that, on average, 18.13 percent of shareholdings in the South African listed firms are owned by managers. Furthermore, 35.4 percent are owned by Institutional shareholders. This is a feature of high institutional ownership concentration, according to Kouki and Guizani (2009). Their study finds that institutional investors hold 35 percent of shareholdings in Tunisian firms. In addition, foreign shareholders own on average 23 percent of shares. Therefore, on average, 76.53 percent of South African shares are held by managers, institutions, and foreign owners. The remainder of the shares is either owned by other types of shareholders or not distributed to shareholders.

Furthermore, the firm profitability *PR* measured by ROA has an average mean of 8 percent. Our average mean is higher than firms from emerging economies of 3 percent for Jordanian firms (Hanady, 2021). Also higher than firms in the developed countries of 3.7 percent for firms in the United States (Ngo et al., 2020) except Sweden with a ROA of 7.9 percent (Björn & Eriksson, 2016). But the leverage for South African listed firms is high, with an average mean of 66 percent. The result suggests that, on average South African firms hold 0.66 percent debt for each percent of equity. The result suggests they prefer a mix of high leverage with equity in their capital structure. Our leverage is higher compared to Iranian firms, with a mean of 8 percent Eskandar et al. (2011). However, the leverage for South African firms at 66 percent is lower compared to Tunisian firms with an average of 180 percent Kouki and Guizani (2009) and Swedish firms with an average of 109 percent (Björn & Eriksson, 2016).

Table 1. Summary Statistics of Key Variables

Variable	Mean	Std Dev	Min	Max
DIV	0.4364	0.2954	0	0.8636
MOS	0.1813	0.2261	0	1.739
IOS	0.3540	0.2614	0.0002	1.2623
FOS	0.22996	1.3891	0	40.1
IN_FS	19.947	3.3299	14.02	28.9284
PR	0.0872	0.2991	-0.184	8.51
LV	0.6648	2.0368	0	49.118

Source: Author's own calculation

Hausman tests are carried out for FE and RE models to determine the appropriate regression estimation technique. The results obtained from the Hausman test p-value is 0.0781, at all significance levels above 7%, we fail to reject the null hypothesis that RE is preferred. However, at the conventional 10% level of significance, we reject the null hypothesis suggesting that FE is preferred over RE for the current data

set. Therefore, both the RE and FE will be conducted in this study since the Hausman test at both 1%, and 5% significance levels select RE and at 10% level of significance selects FE.

4.2. Regression Results for Ownership Structure and Dividend Policy

This section presents the FE and RE results on the impact of ownership structures on dividend policy for South African listed firms estimated using equation 1. Table 2 presents the estimation results for FE and RE.

Table 2. Dividend Policy and Ownership Structure in Africa: RE and FE Panel Regressions

	FE	RE
MOS	0.014	-0.037
	(0.19)	(-0.58)
IOS	-0.004	-0.038
	(-0.06)*	(-0.62)
FOS	-0.005	-0.005
	(-0.77)	(-0.85)
IN_FS	0.042	0.015
	(3.13)***	(2.57)*
PR	0.072	0.078
	(2.51)**	(2.74)***
LV	-0.0003	-0.002
	(-0.06)	(-0.38)
Prob>F	0.000	0.016

The standard errors are shown in parentheses. *, **, and *** represent p-value for statistically significant variables at 10%, 5%, and 1% level of significance, respectively. Source: Author's calculation based on sample data obtained from S & P Capital IQ database (2020).

4.2.1. Interpretation of Results

The result in Table 2 shows that MOS is not significant for both models. Thus, suggesting that the relationship between the firm's dividend pay-out and managerial ownership structure is not statistically significant. However, the positive relationship on dividend pay-out supports our assumption even though insignificant. The results are not in line with Shah et al. (2011) for Pakistan firms and Al-Gharaibeh et al. (2013) for Jordanian firms where a significant positive relationship was found between managerial ownership and dividend pay-out. However, our results are in line with Eskandar et al. (2011) for Iranian firms; Akhalumeh and Ogunkuade (2021) for Nigerian firms. The insignificant on managerial ownership may be because

managers have 18 percent ownership in South African firms. As a result, the little percentage ownership cannot influence dividend pay-out decisions.

For institutional ownership, the coefficient on *IOS* is negative and significant for the FE model at a 10 percent level of significance. The result implies a negative and significant relationship between institutional ownership and dividend pay-out, which is consistent with the expectations of this study. Thus, we reject the null hypothesis. The negative impact of institutional ownership is supported by Eskandar et al. (2011) for Iranian firms and Sinnarajah (2020) for Sri Lanka firms. But inconsistent with Suwaidan and Khalaf (2020)'s findings for Jordanian firms that institutional ownership has a positive impact on dividend pay-out.

For foreign ownership, *FOS* results in both models suggest that the relationship between *FOS* and *Div* is statistically insignificant, with a negative relationship. The negative coefficient contradicts the study's expectations. There is essentially no relationship between foreign ownership and a firm's chosen dividend policy. The insignificant and negative relationship results contradict Chai (2010)'s findings for Korean firms and Ullah et al. (2012) for Pakistani firms, where a significant positive relationship was found between foreign and dividend policy.

For control variables, *In_FS* has a positive and significant relationship on Div at 1 percent significance level for FE. It is expected for the firm size to have a positive impact on the dividend pay-out because a large firm has more resources and capabilities to produce higher cash inflows, which leads to higher dividend pay-out. Our result is consistent with Eskandar et al. (2011)'s findings for Iranian firms.

PR has a positive and significant impact on *Div* at a 5 percent level of significance. The positive relationship could be explained as profitable firms pay-out dividends. A firm that makes large profits will have more funds available to make higher dividend payments to its shareholders. This confirms Hanady (2021) findings for Jordanian firms; Björn and Eriksson (2016) for Swedish firms. However, our results contradict Ngo et al. (2020) for US firms who found a negative relationship between profitability and dividend pay-out. Leverage has no significant impact on Div. The insignificant results between the firm's dividend payout.

4.3 Discussion of Findings

The study's objective was to examine the impact of ownership structure on dividend pay-out of listed firms in South Africa. From the result, managerial ownership and foreign ownership have no significant impact on dividend pay-out. The insignificance impact of foreign ownership on dividend policy may arise because JSE is one of the most developed globally with strong investors protection regulations (National Treasury, 2017). Thus, the presence of foreign ownership may not have yielded a significant impact of active monitoring. In addition, the presence

of foreign ownership may not be high enough to impact dividend pay-out significantly.

Furthermore, institutional ownership has a negative and significant impact on dividend pay-out. Firstly, the significant impact of institutional ownership stems from high institutional ownership in South African firms. Secondly, on the one hand, a negative relationship implies that an increase in institutional ownership tends to decrease dividend pay-outs. On the other hand, the negative and significant impact imply that these institutional investors can monitor managers' performance, reducing agency costs and therefore, reducing the need for higher dividend payments.

Our study result is contrary to the theoretical assumptions that managerial ownership tends to decrease dividend pay-out. However, our result is not significant but has a positive effect on dividend pay-out. Furthermore, our study result is also contrary to the theoretical assumptions that institutional and foreign ownership tends to increase dividend pay-out. In this context, the institutional and foreign shareholders monitor the activities of the managers closely.

Size is used to make a comparison of the relevance of large firms paying dividends. The result shows that dividend payment is affected by the size of firms in South Africa. The positive and significant impact on dividend pay-out implies that larger firms are able to generate sufficient earnings for dividend pay-outs (Björn & Eriksson, 2016). Profitability positively impacts dividend pay-out, suggesting that firm profitability positively impacts dividend pay-out decisions of South African firms.

The South African context is contrary to the agency theory where large shareholders use an increase in dividend pay-out to reduce available earnings for the benefit of managers. According to Kien and Chen (2020), large shareholders use their influences to increase dividend pay-out for the maximisation of returns on their shareholdings. But the result for South African firms suggests otherwise as foreign ownership has a negative and insignificant impact on dividend pay-out. Also, institutional ownership has a negative and significant impact. From the result, ownership is concentrated with the institutional shareholders, yet they do not pressure managers for dividend pay-out. The result shows that dividend policy is not an active variable positively and significantly impacted by ownership structures for listed firms in South Africa. Nevertheless, South African firms have a high dividend pay-out which may be impacted by size and profitability.

5. Conclusion

The objective of the study was to investigate the impact of three major ownership structures on the dividend policy of firms. From the theoretical and empirical evidence, it was clear that there could be a relationship between a firm's ownership structure and its dividend policy in this study. This study was conducted amongst 89 firms that fall under the JSE All Share in South Africa. This study's results contradict what had been expected after inspection of the theoretical and empirical evidence. The study results revealed that managerial and foreign ownership essentially do not have any impact on the dividend policy that a firm chooses. This finding on managerial ownership and foreign ownership contradicts expectations as it was expected that they affect the dividends paid. The insignificance could result from their ownership not being high enough, like the institutional ownership to have a significant relationship. Institutional ownership was found to decrease the dividends paid out. This is expected because they are better able to monitor the performance of managers.

This study's results warrant further investigation of the factors causing managerial and foreign ownership to have statistically insignificant effects. The suggestion is for future researchers to increase the sample size by including more listed firms. Expanding the sample size to include even firms with smaller firm sizes may reveal different results. Increasing the sample size can allow for more information to be collected, increasing the study's confidence interval and reducing any uncertainty. Increasing the sample size will allow researchers to have results that are more representative of the population. Overall, ownership structure has no positive and significant impact on the dividend policy of firms in South Africa. This study will benefit investors seeking to invest in JSE stocks as it will inform them as to which variables will affect their expected dividends.

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