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INFLUENCE OF FIRM-SPECIFIC FACTORS ON PERFORMANCE OF FIRMS LISTED AT DAR ES SALAAM STOCK EXCHANGE, TANZANIA

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ABSTRACT
Firm performance (FP) has always been influenced by both financial and non-financial factors. However, a number of contradictions have been registered with regard to which factors have direct influence on FP. Similarly, a reasonable number of studies have concentrated on financial factors leaving non-financial factors fairly unattended. The study on which this paper is based examine the influence of both financial and non-financial specific factors on FP using those firms listed at Dar es Salaam Stock Exchange (DSE). Mixed methods approach with an explanatory sequential design was used. The study applied a sample of 21 local listed firms spanning from 2006 to 2019, and unbalanced panel data were used. Data on the dependent variable (Return on Assets) and on independent variables (firm leverage, sales growth, dividend pay-out, management competence, human capital, firm age, firm size and geographical diversification) were obtained from DSE. Fixed effect model and Pooled Ordinary Least Square was run with three estimations and thematic analysis was used for data analysis. The results indicated that all firm-specific factors had positive significant influence to performance among listed firms. It is concluded that firms whose management teams are competent and have effective understanding of firm-specific factors are in a better position of ensuring that such factors are used for maximum FP. It is recommended to shareholders to hire competent and skilled managers who will control the existing resources available in the firm. It is further recommended to firm managers to borrow when the firm is in financial predicament and pay dividends as per their payment schedule so as to attract more investors.

Keywords: *Firm-specific factors, firm performance, listed firms, stock exchange*
Paper type*: Research paper*
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1. INTRODUCTION

Profitability of a firm has always been an important measure in determining firm financial performance. Investors and other stakeholders focus their attention on profitability before taking any rational decisions regarding investing or withdrawing from the firm (Dioha, *et al*., 2018). It is through performance that investors measure how well a firm can use its assets to generate profits (Batchimeg, 2017). Thus, investors have analysed different audited financial reports as well as gathered information from regulatory

authorities with regard to different firms' financial performance with view of making informed investment decisions (Alarussi and Alhaderi, 2018). They have always done this to ensure that they have adequate information about the performance trend of firms they are intending to invest in. Upon realising this, firm managers have tried their level best to ensure that they perform to their maximum level as a means of attracting more investors (Chandrapala and Knápková, 2013).

According to Bist *et al*. (2017), firm performance is the ability of a firm to obtain and manage its important resources in several different ways with an intention of creating more profits through its competitive advantage. It entails using the available resources/assets to generate profits. Several measures have been developed by financial experts to measure firm performance (Taouab and Issor, 2019). While others have proposed the use of financial ratios (Matar and Eneizan, 2018; Mutende, Mwangi, *et al*., 2017), Liargovas and Skandalis (2010) have used measures such as Return on Equity(ROE), Return on Assets (ROA), and Net Profit Margin(NPM), among other measures. Other scholars (Zainudin *et al*. 2018) have, on the other side, developed three dimensions through which firm performance can be measured. These include measures based on firm's productivity; profitability; and market premium dimensions (Omondi and Muturi, 2013). For this study, ROA was used because it normally provides a clear picture of how a firm is performing in financial aspects i.e. using its assets to generate profits (Rwechungura, *et al*., 2020; Tailab, 2014).

It is all the time; firm performance has been influenced by both financial and non-financial factors. Financial factors, as observed by different scholars (Dioha *et al*., 2018; Mule*et al*., 2015; Chandrapala and Knápková, 2013; Almajali *et al*., 2012) include dividend pay-out, sales growth, financial leverages, liquidity, firm growth, market shares, asset tangibility, capitalisation ratio, to mention but a few. On the other hand, non-financial factors include management competence, human capital, scope of operation, firm size, firm age, organisation culture, technology, innovation and geographical diversification (Borda *et al*., 2017; Liargovas and Skandalis, 2010; Skandalis *et al*., 2008; Malik, 2011; Daniel and Tilahun, 2013; Pantea *et al*., 2014). Despite having a set of both financial and non-financial factors, there is still a debate as to which set of factors should be considered when measuring firm performance and the influence each factor has on the same.

Based on the above arguments, a number of studies have used different sets of factors to measure firm performance; yet, different findings have been obtained. For instance, Mao and Gu (2008) examined the relationship between firm financial factors and firm performance in the US and found that debt leverage and asset activity were significant to firms performance, but Liargovas and Skandalis (2010), using similar variables in Greece, found debt leverage to have a negative influence. Another study by Khan *et al*. (2015) on determinants of financial performance of firms in Karachi Stock Exchange found that leverage, liquidity, size, risk, and tangibility had a significant effect on firm financial performance. Contrary to these findings are those of Bist *et al*. (2017) used the same variables in Nepal and found that liquidity and leverage had a negative insignificant influence on financial performance.

In developing countries, the topic has also been studied. For instance, Dioha *et al*. (2018) conducted a study to estimate the effect of firm characteristics on profitability (measured by ROS) in Nigeria. The study found that firm size, sales growth and leverage had a significant influence on profitability while firm age and liquidity appeared to have insignificant influence. The results are in contradiction with results by Maleya and Willy (2013) that used similar variables in the Kenyan context and found that firm age and liquidity had significant influence on firm performance. As for the Tanzanian context, there is dearth of literature regarding the subject. An available study by Assenga (2018) focused on the impact of board characteristics and found that gender diversity had impact on financial performance, while Norman (2011), who concentrated on financial analysis as a consideration for stock exchange investment, reported that some investors consider financial analysis as opposed to others.

Based on the discussion above, it can be conjectured that there is an inconclusive debate with regard to which factors have stronger influence on firm performance in both developed and developing countries.

Secondly, the reviewed literature depicts that most scholars have concentrated on financial factors and fairly neglecting the non-financial ones. Non-financial factors, for instance, management competence, human capital and geographical diversification are of paramount importance for as expressed by various scholars (Borda *et al*., 2017; Pantea *et al*., 2014; Skandalis *et al*., 2008). This calls for a study that will contribute to the debate in the Tanzanian context by combining both financial and non-financial firm-specific factors that influence firm performance. Thus, the study on which this paper is based intended, among other things, to bridge the existing knowledge gap by examining the influence of both financial and non-financial specific factors to determine their combined effect on firm performance by using listed firms at Dar es Salaam Stock Exchange (DSE). To study the existing influence of these factors on firm performance, the following hypothesis was formulated:

Ho: Firm-specific factors do not influence performance firms of listed at DSE

2. THEORETICAL UNDERPINNINGS OF THE PAPER

This paper is guided by the Resource Based Theory (RBT) propounded by Wernerfelt (1984) and supported by Barney (1991). The theory has been used in the study as a method of identifying and analysing firm's endowed strategic resources based on examining their peculiar combination of assets, capabilities, skills and other intangibles (Pearce and Robinson, 2011). The theory is concerned with firm-wise specific factors and their influence on firm performance. The theory assumes that a firm possesses a bundle of resources brought together to enhance firm capabilities used to realise firm performance (above normal profitability) (Grant, 1991). Every firm develops these recourses to their fullest potential from which the competitive advantage of the firm is obtained. This theory helps to explain how firm-specific factors influence variations in firm performance across industries.

It gives clear explanation to both financial and non-financial resources and how they influence firm performance. Financial resources include leverage which entails the measure of a firm's capital structure (debt versus equity); sales growth which is the increase in the total sales unit of a firm over a certain period of time; and dividend pay-out which determines if and how the firm distributes its earnings. With regard to non-financial resources, these include management competency which entails the ability of management to generate resources by using the available professional resources; human capital, which means the use of skills owned by human resources to generate profits; firm size, a tangible asset used by firms to gain competitive advantage; and firm age determining the experience of the firm used to gain competitive advantage over its competitors hence raising its ability to register increased firm performance. With those realities, the theory is relevant, and hence it was used to determine the influence of firm-specific factors and its performance. The theory has also been used by a number of scholars (Dioha *et al*., 2018; Lazăr, 2016) to determine the relationship in other contexts, but in this paper the theory has been applied in the Tanzanian context.

3. METHODOLOGY

Explanatory sequential research design from a mixed research method was used in the study on which this paper is based. The design allows for collection, analysis and interpretation of data by using both qualitative and quantitative techniques in sequences whereby quantitative data are collected first and qualitative data later. The latter are used to explain and validate results obtained in the former (Creswell and Plano Clark, 2018). The researcher was prompted to use the approach because of the need for obtaining valid and reliable findings (Bentahar and Cameron, 2015) and corroborate findings obtained by both methods (Creswell, 2013). The quantitative findings are validated by qualitative ones in the analysis and discussion sections of this paper (Creswell and Plano Clark, 2011). However, quantitative data analysis dominates in this paper due to their power in explaining relationships between variables (Bryman, 2016) and have been used by different scholars (Chandrapala and Knápková, 2013; Omondi and Muturi, 2013; Dioha *et al*., 2018) to determine association between two variables. In order to complement, validate and maintain quality of quantitative results, qualitative findings were used in the study (Creswell and Plano Clark, 2011).

3.1 Model Specification and Analysis

The Panel Regression Model was used to analyse the influence of firm-specific factors on the performance of firms listed. Dataset used in the study (Panel data) perfectly suit the model and are likely to give valid results and have been commonly used by earlier researchers (Too and Simiyu, 2019; Khan *et al*., 2015; Chandrapala and Knápková, 2013). Due to the fact that the dependent variable was numeric, it qualified for the study to use the model. The panel regression model and variables used are presented in equation (i).

$$ROA_{it} = \beta_0 + \beta_1 firmlev_{it} + \beta_2 sgrowth_{it} + \beta_3 divpay_{it} + \beta_4 mc_{it} + \beta_5 hc_{it} + \beta_6 fsize_{it} + \beta_7 fage_{it} + \beta_8 Gdiver_{it} + fd_i + td_t + \varepsilon_{it} \quad \text{(i)}$$

where: ROA is the dependent variable; β_0 is a constant;$\beta_1\beta_8$are coefficients (set of independent variables i.e. *firmlev, sales growth, dividend pay-out, management competence, human capital, firm size, firm ageand geographical diversification*); fd_i is firm dummy capturing time invariant firm's specific effect;td_t is time dummy capturing time variant specific effect,; ε is an error term, assumed to be white noise, i and t are firm and time units respectively. For the purpose of checking robustness, Pooled Ordinary Least Squares technique (POLS) was used and was run with three estimations: 1, 2 and 3. This was done by dropping control variables, with the aim of checking if the findings were consistent with those in the baseline model (Fixed Effect). Thematic analysis was used to analyse qualitative data by identifying important themes in the text, analysing them and providing sensible account of the themes (Braun &Clarke, 2006). In this paper, pre-developed (eight) themes were considered in the analysis to study the influence of firm-specific factors on performance of listed firms.

3.2 Data Type and Source

In the quantitative section, panel data on ROA (dependent variable); leverage, sales growth, dividend pay-out, management efficiency, human capital, firm size, firm age and geographical diversification (independent variables) were collected from audited annual reports of firms listed on DSE. In this regard, panel data for all local listed firms were employed covering the period from 2006 to 2019. Panel data were used as they give more informative; more variable; they have less collinearity; they possess more degree of freedom and efficiency; and they can measure and identify effects that cannot simply be detected by cross-sectional and time series dimensions. Hence, they are likely to provide reliable and generalisable results (Biorn, 2017; Woodridge, 2002). The data that were used ranged from 2006 onwards because it is the period when data of listed firms were available as it is the same year that DSE started to keep those data electronically in compliance with the Company Ordinance. In 2002 requirements started being registered in the same year and observance of International Financial Reporting Standards by listed firms which started in 2006 as well after being introduced in 2004. Thus, in this paper, for each year in which data were collected, data for January to December were used. On the qualitative aspect, the researcher used semi-structured interviews to serve the purpose. This was due to flexibility and ability of the approach to give respondents a chance of expressing themselves freely (Bryman, 2016). Knowledge, skills and experience in capital market determined the nature of respondents to be included in the study. The key Informants were drawn from brokers, regulators, and firm representatives.

3.3 Sampling and Sample Size

A census approach was used to sample all 21 local trading firms that had listed by the end of 2019. This is because DSE had few firms listed and minimising them would have reduced the validity of findings. Thus, all the 21 firms were used for analysis in the study. With respect to key informants, the researcher purposefully selected 8 participants including 2 regulators, 1 broker and 5 firm representatives, the selected firm representatives depending on their years of participation on stock exchange. Maintenance of ethical values of informed consent, confidentiality, privacy as well as respondents' dignity was given an upper hand in the study (Siwandeti *et al*., 2021; Bryman, 2016).

3.4 Measurement of variables

Traditionally, the performance of firms has been determined based on financial measures (Tangen, 2003). However, in this paper ROA has been used to measure firm performance rather other measures used other studies (Batchimeg, 2017; Ahmed *et al*., 2011) such as ROE, cash flows, profit margin, and Tobin Q, among other measures. ROA was used because it is an accounting performance measure which reflects the past performance of the firm (Rwechungura *et al*., 2020; Mao and GU, 2008) and determines the ability of firm managers to generate profits by using the available assets (Liargovas and Skandalis, 2010). Other studies (Dioha *et al*., 2018; Khan *et al*., 2015; Hunjra *et al*., 2014) employed ROA in determining firm performance. Table 1 presents the measurement of each variable and the expected signs.

Table 1: Explanation of variables and expected signs

Variables	Full Name	Measurements	Expected Sign
Dependent			
ROA	Return on Asset	Profit before tax divided by total assets times100.	
Independent			
Firmlev	Firm leverage	Total debt to equity (debt/equity ratio)	+
Sgrowth	Sales growth	Current year's sales minus previous year's sales over the results of previous year's sales	+
Divpay	Dividend pay-out	Dichotomous i.e 1 for some dividend, 0 for none	+
Mc	Management competence	Profit before tax over number of professionals degree.*	+
Hc	Human Capital	Number of employees of the firm.	+
Fsize	Firm size	Measured by taking the natural logarithm of the total assets of the firm.	+/-
Fage	Firm age	Number of years since incorporated till the period of study.	+/-
Gdiver	Geographical Diversification	1 for some diversification; 0 for none	+

Note *The study considers profits before taxes for each consecutive year, that is between 2006 and 2019. The number of professionals degree is considered constant for all years since the firm was listed. It is assumed that there are small changes over the years which have little or negligible effect. To be considered a professional, two criteria were set: (i) possession of a university degree, and (ii) under direct control or forming part of management team as earlier used by Skandalis *et al*., (2008).

3.5 Diagnostic Tests

Regression analysis is governed by important assumptions. These have to be adhered to for results to be valid and reliable. Therefore, the assumptions were tested before undertaking the regression analysis. For the purpose of adhering to regression requirements, important assumptions of normality, Multicollinearity, heteroskedasticity and autocorrelation were tested (Pallant, 2010).

3.5.1 Normality

Normality distribution of residual is among classical linear regression assumptions to make best unbiased estimate (Gujarati, 2004). According to Ahmed *et al*. (2011), normally distributed data must have 0 skewness with an accepted range of -1.0 and +1.0 and -3.0 to 3.0 as acceptable range for kurtosis. The Results in Table 7 indicate that all the variables were within the acceptable range for both skewness and kurtosis hence favouring normality.

3.5.2 Multicollinearity Test

In testing Multicollinearity, the researcher used a matrix of pair-wise correlations among variables and coefficients of correlations of the variables. Correlation coefficients normally illustrate the strength and linear relationship between two variables and should not be highly correlated although its value doesn't fully characterise their relationship (Barrow, 2006). Multicollinearity assumption is met when correlation

coefficients are ≤ +0.9 or ≥ -0.9 among variables (Field, 2013). From Table 2, the coefficients of correlation in absolute terms were within the range of ≤ +0.9 or ≥ -0.9; so, they confirmed that there was no Multicollinearity between variables included in the multiple regression model used in this study.

Table 2: Pair-Wise Correlation Matrix of the Explanatory Variables

	ROA	Firm leverage	Sales growth	Dividend pay-out	Management competence	Human capital	Geographical diversification	Firm size	Firm age
ROA	1								
Firm leverage	-0.2866	1							
Sales growth	0.0086	-0.0569	1						
Dividend pay-out	0.4531	-0.0826	-0.1144	1					
Management competence	0.3928	-0.2762	-0.028	0.3169	1				
Human capital	0.1952	0.234	-0.0447	0.3684	0.0863	1			
Geographical diversification	-0.0622	0.1977	-0.086	0.0191	-0.1066	0.29	1		
Firm size	0.2296	-0.2097	0.0632	0.1985	0.7929	0.1304	0.0875	1	
Firm age	0.2872	-0.3061	-0.083	0.1109	0.1771	-0.1102	-0.5541	-0.038	1

Also, Multicollinearity was tested by using Variance Inflation Factors (VIFs). According to Gujarati (2004), Multicollinearity exists among independent variables if the inverse of VIF value is less than 0.1 or VIF higher than 10. Table 3 shows that Multicollinearity did not exist among all variables because inverse values of VIF value were greater than 0.1.

Table 3: Variance Inflation Factor (VIF) for Multicollinearity Test

Variables	Management competence	Firm size	Geographical diversification	Firm age	Firm leverage	Human capital	Dividend pay-out	Sales growth
VIF	3.52	3.4	1.72	1.66	1.61	1.45	1.38	1.07
1/VIF	0.284389	0.294429	0.581463	0.603697	0.619829	0.687789	0.726188	0.930851

3.5.3 Heteroscedasticity Test

Breusch-Pagan / Cook-Weisberg test was used in this study to test heteroscedasticity in panel data as indicated in Table 4. The null hypothesis of this test, the error variance was constant (homoscedastic).
H_o: Constant variance

Table 4: Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Return on assets (ROA)	**$chi^2(1)$**	**7.42**
	Prob > chi^2	0.8798

Breusch-Pagan test produced a p-value of 0.8798 from a chi-square value of 7.42 for the ROA model. The probability of chi-square was statistically significant at 5 per cent level. Therefore, the null hypothesis (H_o) of constant variance was accepted due to lack of heteroskedasticity in the study data (p value ≥ 0.05).

3.5.4 Autocorrelation test

Wooldridge test was used to test autocorrelation in this study as presented in Table 5. The results showed that p- value was 0.2630 and its associated F statistic value was 1.335 for ROA. The null hypothesis of this test was no first order autocorrelation in the data.

H_o: *No first-order autocorrelation*

Table5: Wooldridge test for autocorrelation in panel data

Return on Assets (ROA)	**F(1,18)**	**1.335**
	Prob > F	0.2630

ROA results showed that the p-value of 0.2630 was greater than the chosen alpha level 0.05 (p value ≥ 0.05); so, the null hypothesis that there is no serial correlation was accepted, meaning that all important variables were included in the analysis and the model was in a correct function form.

3.5.5 Hausman Test

Hausman specification test was used to decide whether to use Random Effect (RE) or Fixed Effect (FE) model. RE model assumes that the mean scores of the group are random from the population while FE Model assumes that the mean scores of the group are fixed. The Hausman null hypothesis states that difference in coefficients is not systematic. For the ROA model test, the reported p-value was 0.0226 which was less than the chosen alpha level of 0.05 (Table 6). Hence, the null hypothesis (random effects would be consistent and efficient) was rejected in favour of the alternative hypothesis (fixed effects would be consistent and efficient).

H_O: *Difference in coefficients is not systematic*

Table 6: Hausman test for fixed effects model

Return on equity (ROE)	**$chi^2(8)$**	**14.72**
	Prob >chi^2	0.0226

For this study findings, FE model was appropriate because the Prob > chi^2 was 0.0226, less than the chosen alpha level 0.05. Hence, the study used FE as a baseline model to analyse the influence of firm-specific factors on the performance of listed firms.

4. EMPIRICAL RESULTS AND DISCUSSION

4.1 Descriptive statistics on firm-specific factors and performance of firms

This section presents descriptive statistics showing the behaviour of study variables in order to give an extended overview of variables used in the study. Measures of central tendency (only mean) and measures of dispersion (minimum, maximum and standard deviations) were used. Table 7 presents a summary of the descriptive statistics that were computed.

Table 7: Descriptive statistics summary of dependent and independent variables

Variable	Obs	Mean	Std. Dev	Min	Max	Skewness	Kurtosis
ROA	227	12.19731	25.02674	-163.77	69.26	-0.426871	2.341715
Firm leverage	227	0.4932459	0.5836866	0.0018043	4.62699	-0.647814	2.132385
Sales growth	227	0.8265669	8.848455	-0.9991336	132.5252	0.439294	2.110357
Dividend pay-out	227	0.5947137	0.4920323	0	1	-0.3858404	1.148873
Management competence	227	13.26141	3.190112	4.85345	19.95417	-0.1990664	2.326155
Human Capital	227	591.3348	809.8098	4	3450	0.4568313	2.041902
Firm size	227	7.696089	1.105455	4.674724	10.13887	-0.2197617	2.084392
Firm age	227	23.56828	17.16032	0	69	0.9909744	2.024824
Geographical Diversification	227	0.5594714	0.4975477	0	1	-0.3628123	2.252636

Descriptive statistics indicate that ROA for 227 observations was made out of 21 firms for the years from 2006 to 2019 (Table 7). The results indicated that ROA had a mean of 12.2 lower than the standard deviation of 25.03 which indicates that there was a great dispersion between ROA among different firms. Leverage had a mean value of 0.49 and a standard deviation of 0.58. This indicates that there was low

level of borrowing among listed firms because the average was even below 50%. Sales growth, on the other hand, had a mean of 0.83 and a standard deviation of 8.85, a minimum of -0.99 and a maximum of 132.53. This indicates that sales growth was high among listed firms. Although some firms had a negative sales growth, a substantial number of them had reasonable sales growth rates (132.53). With regard to dividend pay-out, the variable had a mean of 0.59 higher than the standard deviation of 0.49, indicating that although some firms were not paying dividends, some firms were giving dividends, which indicates that these firms were performing well. Management competence was recorded to have a mean of 13.26 and a standard deviation of 3.19. This implies that there were a reasonable number of competent and qualified managers who played a great part in meddling between financial and non-financial factors to ensure that they generated remarkable performance as expected by shareholders and other stakeholders. Human capital was also recorded to have a mean value of 591, a standard deviation of 809 with a minimum value of 4 and a maximum value of 3450. In these firms there were a reasonable number of employees, though the number was greatly dispersed among firms. While some firms had many employees, others had very few of them. This difference was attributed to the nature of activities performed in the firms. Firm size, one of the non-financial factors studied, was recorded to have a mean of 7.70 and a standard deviation of 1.11, a minimum of 4.66 and a maximum of 10.14. This implies that the sizes of firms did not differ greatly among the listed firms and shows that large firms were able to enjoy economies of scale and the average costs of production were low hence attracting more profits. Firm age had a mean value of 23.6, a standard deviation of 17.2 and a maximum of 69. This implies that some firms were more experiences than others. This shows that most of the experienced firms were in the position of enjoying benefits of running and were likely to enjoy superior profits due to better firm performance. Moreover, geographical diversification had an average of 0.56.

4.2 Regression Results and Discussion on Firm-specific factors and firm performance

Through the use of the Fixed Effect (FE) model, regression analyses were run to determine the influence of firm specific factors on firm performance. Results of the baseline model were run with three estimations named 1, 2 and 3; the results were as presented in Table 8.

Table 8: Baseline Model on Firm-specific Factors Influencing Firm Performance

Variables	1	2	3
Firm leverage	9.6780***	9.3777***	10.8004***
	(3.370)	(3.373)	(3.216)
Sales growth	1.0539***	1.0544***	1.0678***
	(0.124)	(0.123)	(0.120)
Dividend pay-out	6.0742**	6.7700**	5.5033**
	(2.778)	(2.866)	(2.708)
Management competence	1.1409**	1.7992***	1.2653***
	(0.47)	(0.41)	(0.409)
Human capital	0.0108***	0.0095**	0.0106***
	(0.004)	(0.004)	(0.004)
Firm size	3.9811*	3.8123*	
	(2.049)	(2.080)	
Firm age	0.2216**		0.2638***
	(0.087)		(0.082)
Geographical diversification	18.4854***	18.2660***	
	(6.285)	(6.288)	
Firm dummy	Yes	Yes	Yes
Time dummy	Yes	Yes	Yes
Constant	7.4037	22.4216	13.1914
	(29.082)	(28.120)	(10.380)
Observations	227	227	227

*Standard errors in parentheses Key: * Significant at 10%, ** significant at 5%, *** significant at 1%*

Table 8 presents a summary of baseline model results (FE) after ROA was used as the dependent variable. Three estimations were used in running the baseline model with an intention of checking consistence of findings. The findings obtained indicated that financial factors including firm leverage, sales growth and dividend pay-out had positive and significant influence on firm performance. For non-financial factors, management competence, human capital, firm size, firm age and geographical diversification depicted positive and significant influence on firm performance. The description of each factor is given hereunder.

With regard to **firm leverage**, the findings showed that firm leverage had positive influence on firm performance and the results are consistent in all the three estimations run in the model. These findings imply that firm leverage enhances operations of the firm. Thus, the firm stays in operation, expands its horizon and operations which, when well-managed, improves turnover and hence firm performance. These findings are in support of Nnwana and Ivie (2017), Dioha *et al*., (2018) together with an earlier finding by Ba*e et al*., (2017) but contradict findings by Lasisi *et al*., (2017), Javed *et al.,* (2015) and Banafa *et al*., (2015) who reported that leverage has a negative influence to firm performance. These results are consistent with RBT which considers firm leverage as a financial resource of the firm that when properly managed helps to boost firm operations leading to firm performance. Consistent with these findings, interview results from one of the key informants indicated following:

> *"…Financial leverage enables firms to raise funds through borrowing without diluting the ownership of the existing investors. These funds push firm operations and lead to increasing their performance…" (Senior office, CMSA, December, 2020).*

It is depicted in the findings that **sales growth** has a positive statistical influence on firm performance. This was consistent throughout all the three estimations run in the model. This implies that marketing strategies applied by the firm lead to increasing firms' revenue from sales. This might be through good interactions with the external environment which helps the firm withstand competition, attract different customers and strengthen the distribution channels which ultimately leads to firm performance. The findings are in line with findings by Sumaira and Amjad (2013) and Chandrapala and Knápková (2013). In line with the study findings, the RBT considers sales growth as a financial resource which improves firm performance. However, for the firm to maximise its sales growth, the management must efficiently use other resources including competent human resource (marketing professionals) who will increase sales volume through vigorous promotion campaigns. It was also recorded from interviews with key informants that sales growth over the years has benefits to the firm in terms of additional profits. This results into raising the ability of the firm to pay dividends, acquire more assets as well as expanding the product line. All these are interpreted as increased firm performance.

Dividend pay-out entails paying share profits to a firm's shareholders. In this study, the findings indicated that dividend pay-out has positive and statistical influence on firm performance with consistent observations in all the three estimations run in the model. The findings implies that a firm that pays dividends to shareholders has reasonable profit health from which it pays its stakeholders. But still a firm that pays dividends attracts more investors whose major intention is to generate profits from their invested capital. The two scenarios expounded above indicate that the firm has improved performance. These findings concur with those by Kanwal and Hameed (2017) who reported that firm dividend pay-out influences firm performance. However, the findings contradict those by Akinleye and Adamiloye (2018).

Explaining about this scenario, data from interviews carried which were held with different key informants indicated that dividend policy established by the organization enables the firm to grow as it keeps some of the profits for reinvestment, expansion and growth. Supplementing this, one firm representative was quotes as saying:

> *"…A firm that gives dividends is likely to perform better than a firm which does not give dividends to its shareholders at the specified period of time in the financial year…" (Firm Representative, December, 2020).*

Human capital is one of non-financial factor that has influence on firm performance. The findings presented in Table 8 reveal that human capital had a positive statistically significant influence on firm performance. This implies that, when a firm hires a reasonable number of competent and skilled human resources, it is likely to have improved performance; this is due to the fact that such skilled human resources will take all the firm's operations and use different approaches to ensure that the firm continues to perform well its operations. The findings echo those by Pantea *et al*., (2014) who also found that human resource practices is linked to increased firm revenue and performance. The findings are consistent with the RBT which views human capital as a resource that once optimally used and well managed is likely to bring about positive impact in firms' revenue which accounts for firm performance. Findings obtained from interviews conducted with various respondents on the issue of human capital revealed that human capital is a key to any firm in the sense that the more skilled the staff are, the higher the performance of the firm because they know their responsibilities, have vast knowledge of the product and are in the position of working for the betterment of the product and firm in general.

Firm size describes how the firm is and determines the level of economies of scale enjoyed by the firm. The findings presented in Table 8 indicate that firm size had a positive and statistically significant influence to firm performance. This implies that size of the firm determines how it performs in terms of profitability. Further, the top management has great experience and thus capable of using available resources to make profits. It is also understood that big firms tend to have clear lines of operations that direct everyone what to do when and in what manner. These results are in line with results by Omondi and Muturi (2013) and Ubesie (2014) but contradict those obtained by Chandrapala and Knápková (2013).

Firm age describes the number of years the firm has been in operation. The findings indicated that firm age had positive statistical influence on firm performance. This implies that older firms are well organised, have required resources due to long experience on the field and high investment in technologies which enable them to produce quality products. The results are in line with those by Pervan *et al*., (2017) and Chandrapala and Knápková (2013) who support that firm age influences firm performance. However, Tailab (2018) reported that, due to obsolete skills and technology that induce firm decay, firm age lowers firm performance.

Geographical diversification is an expansionary strategy taken by firms after having realised market opportunities in different geographical locations. The results presented in Table 8 indicate that geographical diversification had a positive statistically significant influence on firm performance. This implies that as firms establish their branches in new geographical locations, they are in a better position of increasing their sales volume and enjoy economies of scope which in one way or another are measures of firm performance. These results are in line with those by Borda *et al*., (2017) but contradict those by Harnandez-Trasobares and Galve-Gorriz (2017).

Management competence is one of the non-financial factors that have great and positive statistical influence on firm performance as depicted in Table 8. It plays a mediating role between financial and non-financial factors with an intention of improving firm performance. This is because they are the flag bearers of the firm, implement and direct strategic direction of the firm by using all other financial and non-financial resources. The more competent the management team the more the firm is likely to increase performance. The findings are in line with those obtained by Liargovas and Skandalis (2010) and also support contentions of the RBT.

4.3 Hypothesis testing on the influence of firm-specific factors and firm performance

H_o*: Firm-specific factors do not influence performance of listed firms at DSE*

Based on the independent variables that were used (financial factors, particularly firm leverage, sales growth, dividend pay-out and non-financial factors particularly management competence, human capital, firm size, firm age and geographical diversification) all the variables had positive significant influence on firm performance among the firms that were surveyed. Therefore, firm-specific factors influence firm

performance when measured by ROA. Hence, the findings provide enough evidence for the researcher to reject the null hypothesis.

4.4 Robustness Check on firm-specific factors and firm performance

For the purpose of verifying consistence and robustness for the findings from the fixed effect model as a baseline model, the Pooled Ordinary Least Square (POLS) was run. This is because it has widely been used in studying issues related to firm performance and has always provided satisfactory results. Secondly, POLS is simple and appropriate in estimating relationship in econometric models as the one used in this study (Mao and Gu, 2008). In this analysis, similar variables as those in the baseline model were used. Thus, ROA was the dependent variable which was used to determine firm performance, while financial factors (firm leverage, sales growth, dividend pay-out) and non-financial factors (management competence, human capital, firm size, firm age and geographical diversification) were used as a set of treatment variables. The findings are presented in Table 9.

Table 9: Analysis of Firm-Specific Factors on Firm Performance by Using POLS

VARIABLES	1	2	3
Firm Leverage	13.9946***	11.6527***	14.1414***
	(3.522)	(3.621)	(3.544)
Sales growth	1.0534***	1.0483***	1.0544***
	(0.133)	(0.134)	(0.137)
Dividend pay-out	7.9821***	8.2360***	6.8023**
	(2.764)	(2.950)	(2.858)
Management competence	2.1702***	1.5032***	2.1855***
	(0.422)	(0.477)	(0.713)
Human resources	0.0115***	0.0116***	0.0105**
	(0.004)	(0.004)	(0.004)
Firm size	3.8208*	3.7291*	
	(2.092)	(2.063)	
Firm age	1.3043***		1.2203***
	(0.329)		(0.257)
Geographical diversification	16.1841***		14.8287***
	(6.109)		(5.599)
Firm dummy	Yes	Yes	Yes
Time dummy	Yes	Yes	Yes
Constant	-33.2194***	-17.7147**	-44.2609***
	(7.146)	(8.899)	(16.889)
Observations	227	227	227

*Standard errors in parentheses Key: * Significant at 10%, ** significant at 5%, *** significant at1%*

The findings on the robustness check presented in Table 9 were presented after running the POLS model which used three estimations. It is evident that variables that had statistically positive influence on firm performance in the baseline model were the same that had statistically significant influence on firm performance when run using POLS. These finding are consistent with those obtained in the baseline model as presented in Table 8. In this regard, the results obtained are strongly robust and further provide a ground for rejecting the null hypothesis.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This paper examined the influence of firm-specific factors on performance of firms listed at DSE. It was found that all the firm-specific factors that were used had positive influence on performance of firms listed. It should be understood that, due to the fact that these factors were under control of the

management, the management of the firms played a pivotal role in ensuring that the factors were well managed that they generated positive influence on firm performance. It is likely to be recorded that firms whose management teams are competent and have effective understanding of the factors are in a better position of ensuring that the factors influence firm performance positively. Knowledge on these factors will inform the managers when and how to borrow, and for what purpose, the nature of employees to hire, strategies to implement as a means of raising their sales volume and when to pay dividends to their esteemed shareholders. When all these are properly managed, firms are likely to run efficiently and profitably which are measured as increased firm performance.

5.2 Recommendations

Based on the findings obtained in this study and on the above conclusions, the researcher recommends the following: Due to the fact that management competence has been observed to have great positive influence on firm performance, shareholders are advised that before handing over managerial functions to agents, they need to scrutinize the types of managers together with their competences. This is because competent managers are in a better position of bringing together both financial and non-financial resources for improving firm performance. Hence, hiring competent management team is likely to bring about positive impact on firm performance and the opposite is likely to be true. Also, firm leverage has been reported to have positive effect on firm performance, the study recommends that, firm managers should only borrow when the firm is in financial predicament and managers should wisely use leverage in pushing firms' operations. It has been recorded that dividend pay-out is positively linked to firm performance; thus, managers are urged to pay dividends as per their payment schedule and profits obtained. Doing this will demonstrate vibrant economic health of the firm which will attract more investors, additional buying and selling of shares, increased turnover/firm revenue, increased product line and expanded firm horizon.

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