FIRM-SPECIFIC DETERMINANTS ON CORPORATE PERFORMANCE: EVIDENCE FROM LISTED PLANTATIONS COMPANIES IN SRI LANKA

Gamlath, G.R.M.*

Abstract

This study concerns the factors influencing on firm's performance of plantation companies in Sri Lanka. Since the study dealt with panel data analysis, Ordinary Least Square (OLS), fixed effect and random effect are employed to analyze the secondary data from 2010 to 2018. The results posit that capital strength, operating expense and firm size have significant relationship with profitability of plantation companies while the firm size shows positive significant relationship in both models. However, performance of these firms does not influence by liquidity and growth rate. In overall, the firm specific factors on Sri Lankan plantation firms' performance are determined by capital strength, firm size and operating expense

Keywords: *Plantation Companies, Corporate Performance, Panel Data, Sri Lanka*

1 Introduction

in terms of corporate performance, still, it is a debatable fact that why some firms perform well and the others are failed. Hence, the study focuses to find the determinant factors of corporate performance, particularly in the plantation companies of Sri Lanka. Presently, the plantation sector contributes substantially in earning of export income to Sri Lanka, in which tea, rubber and coconut are the major agricultural export commodities. Concentrating, the today's change of business environment in the international markets at an leading pace and the drawback of climate change varying

*Department of Finance & Accountancy, Vavuniya Campus of the University of Jaffna
 methikalak@gmail.com; muthugamlath@vau.jfn.ac.lk

disruptions to agricultural productivity across the globe, Sri Lankan's listed plantation companies have been achieved the reward across to many important areas; with the developments in the social-economic positions of its employees, quality control, management techniques and infrastructure at this crucial juncture.

Although the threat of climate change leads to cause varying disruptions to productivity of the agricultural field among the countries, today's global markets are very dynamic and its changes at an increasing pace, At this crucial juncture, Sri Lankan's plantation sector have achieved remarkable position across so many key areas today with the substantial developments in the social-economic conditions of its employees and improvements in the quality control, management techniques, and infrastructure.

Despite the fixed politically motivated interference, listed plantation companies have started investments into crop diversification to amalgamate revenue streams. Indeed, diversification through tea tourism shows enormous successes in many aspects: tea factory tours, hotels, and niche luxury tea trails experiences. Progress of plantation industry is Tea 98% Rubber 95% coconut 96% during the year of 2017(Ceylon Chamber of Commerce and Industry, 2017) and financial progress is 91.31% during the year of 2017. Accordingly, it is revealed that the plantation industry is very crucial for a country like Sri Lanka (Central Bank of Sri Lanka, 2018).

Besides, the plantation sector provides many contributions to the economy in terms of employment, export earnings. Past studies have identified firm-specific factors (operating expenses, leverage, liquidity, capital strength, and firm size) as key determinants of the financial performance for several sectors of Sri Lanka. However, the literature review uncovered any study focused on Plantation sector in Sri Lanka. This study was established as a quantitative research targeting to examine the financial performance of the plantation industry about firm-specific determinants.

The performance of any industry is a vital source of sustainable economic growth. Examining the determinants of firm performance may give insights into what drives performance and suggest necessary lessons both for business top level managers and policymakers (Sebastian, 2016). It is apparent that the performance of the industry depends upon the both external and internal environments of the firm. Therefore, organizations need to identify strengths, weaknesses, opportunities, and threats which they face (Batchimeg, 2017). Thus, it can be predicted that both firm-specific and environmental factors may have an impact on efficiency of the plantation industry. Therefore, this research mainly focused on examining the firms pecific drivers s of the corporate financial performance of the Sri Lankan plantation industry. In this context, the researches on this study theme are very rare. Nonetheless, there are many researches available in the banking industry and other industries globally as well.

2. Literature review

Prasetyantoko & parmano (2008) refers to the Jakarta Stock Exchange, and they found that firm size positively related with profitability while it is not associated with market capitalization. Furthermore, macro factors play a key role rather than firm specific factors on firm's performance. In addition, this study revealed that ownership factors also show the relationship with firm performance.

In terms of association of capital structure with firm performance, Salim & Yadav (2012) posit that short term debt, long term debt, and total debt have negative nexus with both return on asset and return on equity. However, this study found the positive association between growth and profitability. Moreover, it can be seen that the Tobin's Q has significantly positive relationship with short term debt, long term debt and total debt. Werner felt and Montgomery (1988) also used Tobin's Q as a dimenstion of firm performance, and study interprets the consistence of profit maximization with various factor endowments. Industry effects impact more than firm effect, that's reveals that narrowly diversified firms perform better than widely diversified. In contradiction to that, Tvorik and Mc Givern (2004) suggest that organisational factors are vital in ither word almost twice than economic factors in determining the profit of the companies. Further, it can be proposed the frame work lead to partition of these economic contributions of these determinants of organisational performance.

In the context of Mongolian companies, the findings of panel regression show that return on assets has more determinants rather than return on equity and return on sales, while earnings per share, return on costs have positive impacts. Besides, short-term debt ratio and cost to revenue ratio posit negative impacts. Further, Growth in sales, earnings per share and costs to revenue ratio associate positively the financial performance as with return on sales, meantime, return on cost show a positive relation on the financial performance proxied by return on sale (Batchimeg, 2017).

Yazdanfar (2013) considers profitability determinants from large size of sample companies of Sweden. Based on the resource-based approach, the results reveal that productivity, firm size, growth and lagged profitability has significant positive relation with profitability while age of the firm and industry affiliation show negative relation to it. Further, Kogan and Papanikolaou (2013) studied the nexus between firm-characteristics and stock returns. It found that firm characteristics are related with growth ratio indicating the firm value and, thus it gives the specific reason for various transparent anomalies in terms of cross section of stock returns.

Figure -1
3. Conceptual Model
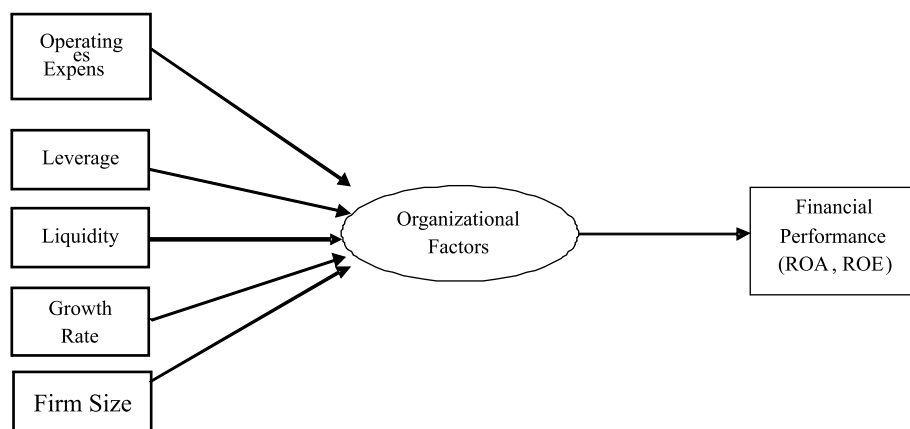
Source: Deduced from literature, 2020

Figure 01: Conceptual Model

3. Research Design

3.1 Data collection

Presently, the plantation sector consists twenty companies as a whole. Thus, this study has considered fifteen companies out of it and five was ignored due to the data availability. In this case the convenience sampling method is used. Further, the most recent nine years period from 2010 to 2018 was selected for this study. The study used the secondary data gathered from annual financial statements Sri Lankan listed plantation companies listed in Colombo Stock Exchange. The data collected from all the listed plantation companies in Sri Lanka, excluding a few, which does not have a required information for this study. The rationale behind in choosing the plantation companies only was considered, as researcher's belief that this sector is an ancient well dynamic business industry so that the researcher can able to achieve the research objectives in an idealistic manner.

3.2 Measurement of Variables

In the case of measuring the performance of these companies, the researcher applied two measures of profitability: Return on Assets (ROA) and Return on Equity (ROE). As Swarnapali (2014) emphasized that ROA reflects the capacity of a firm to earn profits from the firm's assets. In the case of ROE, it implies that the return to shareholders on their equity. This study identified five variables as firm-specific determinants in terms of Operating expenses (OE), Liquidity (LQD), Capital Strength (CS), Growth Rate (GR), and Firm Size (FSZ).

The following table (Table 1) shows how the variables operationalize for the purpose of analyzing data to make findings, which support to achieve the study objectives.

Table - 1
Measurement of Variables

Variable	Measurement
Independent Variables • Operating Expenses (OE) • Liquidity (LQD) • Capital Strength (CST) • Growth Rate (GR) • Firm Size (FSZ) **Dependent Variables** • Return on Assets (ROA) • Return on Equity (ROE)	• Non-interest expense/ Average assets • Current Assets/ Current Liabilities • Equity/Total Assets • Present year's after tax profit/after tax profit of preceding year • Natural logarithm of the accounting value of firm's total assets • Net Income/Total Assets • Net Income/Shareholders Equity

Source: Derived from the theoretical and empirical findings, 2020

3.2 Research Model

The two multiple regression model were formulated to find out the nexus between firm's performance and their firm specific factors.

4. Empirical Findings
Table 2 : Descriptive Statistics

$$ROA = \alpha + \beta_1 OE + \beta_2 L + \beta_3 CS + \beta_4 GR + \beta_5 FS \longrightarrow \text{Model 1}$$
$$ROE = \alpha + \beta_1 OE + \beta_2 L + \beta_3 CS + \beta_4 GR + \beta_5 FS \longrightarrow \text{Model 2}$$

Table - 2
Descriptive Statics

Variable	Obs	Mean	Std. Dev	Min	Max
ROA	75	.0355093	.0705919	-.2261484	.2608511
ROE	75	.0857513	.1670132	-.3428571	.5249764
Operating-expenses	75	.0441496	.0268419	.0073861	.2141272
Liquidity	75	.9689518	1.117287	.1247607	8.09893
Capital strength	75	.3823815	.2182871	-.5356302	.7346809
Growth	75	-1.065952	16.9619	-141.6667	25.37838
Firm size	75	9.443325	.14832	9.147985	9.830845

Source: Researchers' analyzed the data, 2020

Operating expenses ration range between -0.2261 and 0.2608. the liquidity level of the firm taken as high average value of approximately 96%. The firm has varied growth ratio since it takes value from -141.66 to 25.37. Besides, the firm performance measures: ROA and ROE show unstable, as those standard deviation values are more than its mean values. As standard deviation values are below their average of operating expenses, capital strength, firm size, it can be seen that those variables have acceptable volatility. Further, firm size shows a linear constant pattern with the range from 9.147 to 9.830.

Table - 3
Panel results of ROA for the firms (2013 – 2017)

Coefficient	OLS	Random effect	Fixed effect
Intercepts	-1.482544 (0.002)	-1.846909 (0.001)	-5.454493 (0.000)
Operating expenses	.2897499 (0.317)	.1448161(0.640)	-.1534786 (0.688)
Liquidity	.0051857 (0.438)	.004035 (0.568)	.0005862 (0.943)
Capital strength	.1374745 (0.001) **	.133272 (0.005) **	.1393601(0.112)
growth	-.000192 (0.629)	-.0001679 (0.665)	-9.54e-06 (0.979)
Firm size	.153279 (0.002) **	.192832 (0.001) **	.5763766 (0.000) **
R^2	0.3866	0.3813	0.3190
Adj R^2	0.3422		
F statistics	8.70		9.79
p-value	0.0000	0.0000	0.0000
Wald chi^2		38.04	

Source: Researchers' analyzed the data, 2020

Table - 4
Panel results of ROE for the firms (2013 – 2017)

Coefficient	OLS	Random effect	Fixed effect
Intercepts	-2.656341 (0.039)	-2.656341(0.036)	-10.51465 (0.001)
Operating expenses	2.117302 (0.010)**	2.117302 (0.008) **	3.444357 (0.005) **
Liquidity	.0118234 (0.523)	.0118234 (0.520)	-.0319424 (0.214)
Capital strength	.0898904 (0.426)	.0898904 (0.423)	.5990528 (0.029) **

growth	‾.0006377 (0.562)	‾.0006377 (0.560)	‾.000329 (0.772)
Firm size	.2755498 (0.045) **	.2755498 (0.041) **	1.085409 (0.002) **
R^2	0.1605	0.1605	0.0939
Adj R^2	0.0997		
F statistics	2.64		4.77
p-value	0.0305	0.0216	0.0011
Wald chi^2		13.19	

Source: Researchers' analyzed the data, 2020

Table 3 and 4 depicts the results of three panel data analysis: Ordinary Least Square, fixed effect and random effect. Despite firm size shows the similar result in both ROA and ROE models, there are significant variations in those two models. In first model, R^2 value is 0.387 (approx.). It indicates that the predictors in ROA explain 38.7% of variation for the impact of firm is found to be 0.38. It implies that 38% of the variations in ROA are explained by the variations in the predictors named OE, LQD, CST, GR and FSZ. In the second model, R^2 value is 0.161(approx.) It indicates that the predictors in Return on Assets explain 16.1% of variation for the impact of firm is found to be 0.16. It implies that 16% of the variations in ROE are explained by the variations in the predictors named OE, LQD, CST, GR and FSZ. In considering the F Values for both ROA and ROE models (8.70 and 2.64). These indicate the statistical significance of the regression models that were run. Here the p-values of model 1 – ROA and model 2 - ROE are 0.000 and 0.0305, which is less than 0.01 and 0.05 respectively. These indicate that the regression models are statistically significantly predicts the outcome variables. This means that those are good fits for the data. However, based on the above results, ROA model has a highest R-squired (0.3866) and seems to be able to predict more the variations in profitability in relation to the firm's specific factors. Thus, researcher prefer ROA model rather than ROE as predictor of firm performance.

Based on the ROA model which is shown in the table 4.1, firm size is an only variable has a significant positive relationship with firm's performance in all three panel data estimators: OLS, fixed and random). Further, capital strength also shows a significant positive association with ROA except fixed effect model. Nevertheless, operating expenses, liquidity and growth provide an interesting finding that those do not show any significant relationship with firm's performance. However, the importance of this findings may be subject to the number of samples or observations.

Table 5
Variance Inflation Factor

Variable	VIF	1/VIF
OE	1.77	0.56555
LQD	1.35	0.74341
CST	1.25	0.80321
GR	1.18	0.84442
FSZ	1.01	0.98522
Mean VIF	1.31	

Source: Researchers' analyzed the data, 2020

The table 5 shows the tolerance values based on the multi collinearity test. It is clear that multicollinearity does not exist in the models 1 and 2 of this study. The Variance Inflation Factor (VIF) values are less than 10 and the mean VIF is not substantially deviating from one. Therefore, it concludes that there is no multi collinearity problems exist among the predictors used in this study.

5. Conclusion

This paper explores the effects of firm specific determinants on the financial performance of Sri Lankan listed plantation companies. This study employed the panel data models: OLS, fixed effect, random effect, to examine the impact and ROA and ROE were chosen as dependent variables. The results of the study demonstrate that the

profitability of plantation firms is significant and positively related with capital strength and firm size. Furthermore, the firm size of the firms is positively and statistically significant in the both models; it implies that a bank with a relatively large size of bank is more profitable (Swarnapali, 2014; Akhavein et al. (1997). Further, the positive regression coefficient for capital strength was significant, implies that a plantation companies with a relatively large size are more profitable as much as the banks are preferred (Swarnapali, 2014). In terms of capital strength, this finding is in line with Olweny & Shipho, (2011); Athanasoglou, Brissimis & Delis, (2005). It emphasized the importance of capital to improve the profitability and the strong capital strength can have a better profitability than the firms with limited capital. In banking industry, the findings were more consistent with a significant relationship on this predictor for ROA and ROE.

In contrary to the findings of Abdul-Wahab and Razak (2015), Ranasinghe and Athauda (2009), performance of plantation firms in Sri Lanka does not drive by liquidity and growth rate.In addition, this research only nine years' financial statements, which is relatively short-time period and uses only plantation firms. Future researchers should consider extend the present study by more years and the sample size beyond the Sri Lankan Plantation sector. Further studies also can be considering about the different measures of firm performance such as, gross operating profit, earning per share and dividend per Share rather than limiting the performance measures merely to accounting based measures. Moreover, there is a necessity for conducting further studies with incorporating the external factors as well as other internal variables, which may affect to the performance, which have not been included in the models.

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