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THE DETERMINANTS OF FIRMS PROFITABILITY IN
CONSUMER PRODUCT SECTORS

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Abstract

The purpose of this study is to examine the relationship between the current ratio (CR), debt to equity (DE), total asset turnover (TATO), and total asset (TA) ratios with firm performance, return on asset (ROA) for firm listed in consumer product sectors in Malaysia during the period of 2006-2015. This study uses secondary data and the population of companies used include consumer products companies that have listed in Bursa Saham Malaysia. Furthermore, the results are conducted using static panel regression. Based on panel data analysis, this findings showed the determinants factors such as financial leverage, financial efficiency, financial liquidity and size of firm are significantly related to profitability of the firm. In addition, financial efficiency, financial liquidity, and size of firm are significantly and have a positive relationship to the profitability of the firm. Furthermore, financial leverage has a negative relationship with the profitability of the firm. So, means that, financial efficiency, financial liquidity and size of firm are drivers of profitability while financial leverage has a negative influence in consumer product sectors.

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Keywords: Profitability, financial liquidity, financial leverage, financial efficiency, and size of firm.

1. Introduction

Profitability is used to measure any ongoing process in which a business generates a profit from the factors of production such as labor, management and capital. Profitability is also known as a term used by financial experts and corporations when they discuss whether to make or sell a good or service. In other words, profitability analysis is about the relationship between revenues and expenses and on the level of profits relative to the size of investment in the business. Gul (2011) identified a positive relationship between size and profitability. They found that higher the funds can easily meet their rigid capitals so that they can have extra funds for giving loans to borrowers and thereby increase their profits and earning levels.

One of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's bottom line. Profitability ratios show a company's overall efficiency and performance. There are two types of profitability which are margin and returns. Ratios that show margins represent the firm's ability to translate sales into profits at various stages of measurement. Ratios that show returns represent the firm's ability to measure the overall efficiency of the firm in generating returns for its shareholders. The previous researcher (Gill, Biger, Pai, Bhutani, 2009) also found a positive relationship between capital structure and profitability of the firm. In addition, they found a positive relationship between profitability and total debt which describes that the use of leverage is one way to improve the performance of the firm.

The firm's ability to explain sales into profits at various stages of measurement were represented by several ratios that show margins. Furthermore, the firm's ability to measure the overall efficiency of the firm in generating returns for its shareholder was also represented by the ratios. This paper is discussed more on profitability measures of the overall efficiency of the firm in generating returns for its shareholders was also represented by the ratios. In this study, the researcher will investigate the factors that influence the firm's profitability (ROA) including total asset turnover (TATO), debt to equity ratio (DE), current ratio (CR) and lastly total asset (TA). This study tests if financial statement data can be used to determine a firm's ROA. The objective will be accomplished by using panel data in order to gauge the importance of these factors.

Generally, the more efficiently assets are used, the higher a firm's profit. Efficient working capital management involves planning and controlling the current assets and current liabilities in a manner that eliminates the risk of an inability of a firm to meet due to short term obligations and to avoid excessive investment in these assets on the other hand (Mathuva, 2010).

2. Problem Statement

The questions of how and what consumers perceive from products in the market request the process and structure by which consumers value the products. Then, to investigate the consumer's product valuation, it is necessary to integrate operational margin, consumer demands, globalizing economy, and compliance and regulatory pressures.

Return on Asset (ROA) shows how efficiently a company can squeeze profit from its assets. A high ROA is a sign of solid financial and operational performance. Similar goes said by Raya (2008), profitability may be measured in a variety of ways depending on one's specific purpose. The ROA ratio illustrates how well management is employing the company's total assets making a profit. The higher the

return, the more efficient management is in utilizing its asset base. According to Roumiantsev (2005), several papers in this stream attempt to link inventory levels with financial performance and find little or no connection between the two. They also attempt this approach and find no evidence suggest that inventory levels are associated with ROA. Instead, they argue that what matters most too financial performance is not the level of inventory, but rather the ability to manage inventories, to respond to changes in the environment.

Liquidity refers to the ability of a concern to meet its current obligations as and when these become due. As such, every company should maintain an appropriate level of working capital. If the company does not maintain this level, it affects profitability. The liquidity - profitability relationship is associated with the maintenance of the proper level of working capital. Hajayneh (2011) identified the relation between profitability and liquidity who was examined, as measured by Current Ratio (CR) and cash gap (cash conversion cycle) on a sample of joint stock firms in Saudi Arabia. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the CR that affects profitability. The size variable was found to have significant effect on profitability at the industry level. The results were stable and had important implications for liquidity management in various Saudi firms. First, it was clear that there was a negative relationship between profitability and liquidity indicators such as CR and cash gap in the Saudi sample examined. Second, the study also revealed that there was great variation among industries with respect to the significant measures of liquidity.

Leverage, in a financial sense, is the relationship between the debt and equity (DE) capital used to finance a business. The more debt that is used in relation to total assets, the more highly leveraged a business is said to be. (Abor, 2005) conducted a study on the effect of debt on firms in Ghana which indicated a significant positive association between total debt and total assets and return on equity. The results therefore portrayed a positive leverage. Debt problems can arise in the short run even when debt is used profitability. Furthermore, financial leverage results in a firm's income stream is from the presence of fixed financial costs. The level of the presence of fixed financial costs in a firm's cash flow is measured by the degree of financial leverage (DFL). Financial leverage will increase the risk faced by shareholders if the expected return on equity is increase. While according to (Chandrakumarmangalam & Govindasamy, 2010), financial leverage is caused due to fixed financial costs infirm. It is the ability of a firm to use fixed financial charges to magnify the effects of changes in EBIT on the earnings per share. It involves the use of funds obtained at a fixed cost in the hope of increasing the return to the shareholders.

Financial efficiency measures the intensity with which a farm business uses its assets to generate gross revenues and the effectiveness of cost control strategies. Financial efficiency is influenced by production skills as well as by purchasing, pricing, financing, and marketing decisions. There were five ratios, depreciation expense ratio, interest expense ratio and net income from operations ratio (Crane, 2010). According to Gumparthi (2010) in his study, total asset turnover (TATO) takes the total view of the business as a producing unit. It determines the production ability of the assets of the business, which also indicates the managerial capacity of the entrepreneur in putting the assets to the best use.

Many studies suggest that there is a positive relationship between firm size and leverage (Nguyen, 2006). The cost of issuing debt and equity is negatively related to firm size (Nguyen, 2006). In addition, larger firms are often diversified and have more stable cash flows, and so the profitability of bankruptcy for larger firms is less, relative to smaller firms. This suggests that size could be positively related with

leverage. The positive relationship between size and leverage is also viewed as support of asymmetric information (Myers, 1984). Larger size firms enjoy economies of scale and creditworthiness in issuing long term debt and have bargaining power over creditors. These arguments suggest that larger firms have a tendency to use higher leverage. Smith (1977) indicates that because small sized firms bear the high costs of new equity and long term debt issuance, they may prefer to rely on short term debt and more leverage than larger sized firms. Overall, these arguments suggest a negative relationship between leverage and firm size (Biger, 2008). Empirical studies generally support the positive relationship between firm size and leverage hypothesis.

3. Research Questions

The general research question of this study:

1. Is there any significant relationship between the financial ratios and profitability of consumer products sector in Malaysia?

The specific research questions of this study are as follow:

1. Is there any significant relationship between financial leverage and profitability of consumer products sector in Malaysia?
2. Is there any significant relationship between financial liquidity and profitability of consumer products sector in Malaysia?
3. Is there any significant relationship between financial efficiency and profitability of consumer products sector in Malaysia?
4. Is there any significant relationship between size of firm and profitability of consumer products sector in Malaysia?

4. Purpose of the Study

The general research objective that has been proposed to carry out this study:

1. To examine the relationship between the financial ratios and profitability of consumer products in Malaysia

The specific research objectives that have been proposed to carry out this study:

1. To examine the relationship between the financial leverage and profitability of consumer products in Malaysia.
2. To access the relationship between the financial liquidity and profitability of consumer products in Malaysia.
3. To investigate the relationship between the financial efficiency and profitability of consumer products in Malaysia.
4. To reveal the relationship between the total assets and profitability of consumer products in Malaysia.

5. Research Methods

This chapter discusses about the population and sample of the study, data collection method, measurement of variables, and statistical analysis. The details summary about the research methodology is provided in this chapter.

5.1. Population and Sample

There are 60 out of 204 of consumer product companies in Malaysia which are listed in Bursa Malaysia as of February 2017 being choose because it is represents the 30% of population. The information and the analysis are conducted using STATA 10. Besides, the data is gathered from the period of 2006 until 2015.

5.2. Data Collection Method

In this study, the data is collected using the secondary resources. This study use the panel data. Its facilitate analysis of time series and cross-sectional data. Panel data follow a given sample of individuals over time, and thus provides multiple observations on each individual in the sample. Panel data combines the features of time series and cross-section. It provides information on a number of statistical units for a number of years. This study will be analyzed by using Pooled Ordinary Least Square (POLS) in order to examine the simultaneous effect between independent variables on dependent variable. Later, Random Effect Model (REM) and Fixed Effect Model (FEM) are tested besides Breusch-Pagan Multiplier for comparing between POLS and REM and Hausman Fixed Test for comparing between REM and FEM. All the data for dependent and independent variables which include profitability, level of liquidity, efficiency, and total assets of company are obtained from Thomson Reuters.

5.3. Model Specification

$$(\pi ROA_{n,t}) = \alpha + \beta (CR_{n,t}) + \beta (DE_{n,t}) + \beta (TATO_{n,t}) + \beta (TA_{n,t}) + \mu_i$$

Whereby:

πROA	=	Profitability of consumer product
CR	=	Financial liquidity
DE	=	Financial leverage
TATO	=	Financial efficiency
TA	=	Size of firm
n	=	Sample
t	=	Time

5.4. Measurement of Variables

5.4.1. Dependent variable

Return on asset (ROA) is used to represent profitability of a company.

5.4.2. Independent variables

There are four independent variables adopted in this study to be tested as determinant of profitability. There are financial leverage, financial liquidity, financial efficiency and size of firm.

- *Financial liquidity*
Researcher used current ratio (CR) as proxy towards profitability.
- *Financial leverage*
Researcher used debt to equity ratio (DE) as proxy towards profitability.
- *Financial efficiency*
Researcher used total asset turnover (TATO) as proxy towards profitability.
- *Size of firm*
Researcher used total asset (TA) as proxy towards profitability.

5.5. Hypothesis

Hypothesis 1 (Liquidity ratio and profitability ratio)

H0: There is no significant relationship between liquidity ratio and profitability ratio.

H1: There is a significant relationship between liquidity ratio and profitability ratio.

Hypothesis 2 (Leverage ratio and profitability ratio)

H0: There is no significant relationship between leverage ratio and profitability ratio.

H1: There is a significant relationship between leverage ratio and profitability ratio.

Hypothesis 3 (Efficiency ratio and profitability ratio)

H0: There is no significant relationship between efficiency ratio and profitability ratio.

H1: There is a significant relationship between efficiency ratio and profitability ratio.

Hypothesis 4 (Size of firm and profitability ratio)

H0: There is no significant relationship between the size of firm and the profitability ratio.

H1: There is a significant relationship between the size of firm and the profitability ratio.

6. Findings

This study sought to examine the determinants of consumer products which are the relationship between profitability with all the independent variables including financial leverage, financial liquidity, financial efficiency, and size of firm. In this chapter, the findings and the results of the statistical analysis that obtained from the Stata software will be shown as well as the results of the hypotheses. All the data will be explained in the correlation coefficient analysis and regression analysis. Here the results of this study.

6.1. Regression Analysis

Table 01. Pooled Ordinary Least Square (POLS) Test

Variables	ROA		
	Coefficient	Std. Error	Prob.
CR	0.482693	0.12004	0.0000
DE	-0.17438	0.159211	0.2740
TATO	0.431122	0.070767	0.0000
TA	0.379264	0.056789	0.0000
c	-5.28166	0.338126	0.0000
R-squared	0.3159		
Adj R-squared	0.3091		
F-statistic	46.52		
Prob(F-statistic)	0.0000		

The Table 01 shows the pooled ordinary least squares (POLS). POLS test shows that 31.59% of the variation in the level of profitability is explained by four predictor variables collectively. The remaining of 68.41% variance in the profitability is an unexplained variation which due to the omission of some important independent variables in the model. The model is strong because the p-value of F-statistic is significant. While the p-value for each variable is significant except for the debt to equity ratio (DE) is insignificant, 0.2740 above 0.0000.

6.2. Random Effect Analysis

Table 02. Breusch and Pagan Lagrangian Multiplier Test

	Var	Sd=Sqrt (Var)
ROA	0.868407	0.931883
E	0.361727	0.601438
U	0.225634	0.475009
Prob>chi2	0.0000	

The hypothesis for Breusch and Pagan Multiplier Test or Lagrangian multiplier (LM) test can be presented as follows:

H₀ = Choose Ordinary Least Square (POLS)

H₁ = Choose Random Effect Model (REM)

Researcher conducted Breusch and Pagan Multiplier Test or Lagrangian multiplier (LM) test in order to decide whether need to employ POLS or panel data method (REM). From the Table 02, it shows that there is significant value of p-value which is 0.000 smaller than 0.05. Therefore, the null hypothesis (H₀) will be rejected which is POLS and accept the alternative hypothesis (H₁) which is REM. In the subsequent step, the Hausman fixed test will be administered to compare the result from REM and FEM.

6.3. Regression Analysis

Table 03. Random Effects Generalized Least Square Test

Variables	Roa		
	Coefficient	Std. Error	Prob.
CR	0.378946	0.133824	0.0050
DE	-0.37244	0.174833	0.0330
TATO	0.484095	0.08985	0.0000
TA	0.329994	0.081132	0.0000
C	-5.18913	0.482394	0.0000
R-squared	0.1208		
Prob>chi2	0.0000		

Table 03 shows R-squared value explained that 12.08% of variation in dependent variable is able to be explained by independent variables. The remaining 87.92% is due to the omission of other variables that are not include in the study.

For the data above, the p-value for current ratio (0.005), debt to equity ratio (0.033), total asset turnover (0.000), and total asset (0.000) is less than 0.05, the variables are found to be significant in explaining the variation of the return on asset. From the result, the debt to equity ratio has a negative relationship with the return on asset while the current asset, total asset turnover, and total asset have the positive relationship with the return on asset.

6.4. Fixed Effect Analysis

Table 04. Hausman Fixed Test

Variables	ROA			
	Coefficient		(b-B) Differences	Sqrt (diag(V_b-V_B)) S.E.
	(b) fixed	(B)		
CR	0.411255	0.378946	0.032308	0.1015
DE	-0.38165	-0.37244	-0.00921	0.1391
TATO	0.574619	0.484095	0.090523	0.0828
TA	0.260133	0.329994	-0.06986	0.0965
Prob>chi2	0.4937			

Upon administering the Hausman Fixed Test, against the alternate hypothesis of use fixed effect model (FEM) and the null of use panel data regression (REM), the above result was obtained. The p-value was recorded at 0.4937 which is more than 0.05, hence the panel data regression (REM) should be use and do not continue the regression and consider the REM is the last result for the research.

7. Conclusion

From the studies we can conclude that, current ratio significantly affects profitability of consumer product sectors is accepted, and therefore the null hypothesis will be rejected. With 1% increase in current ratio will subsequently increase return on asset by 37.89% which shows the positive relationship. In addition, the research hypothesis also accepted that there is significantly affected between debt to equity ratio and profitability of the firm, therefore the null hypothesis will be rejected. With 1% increase in debt

to equity ratio, will subsequently decrease return on asset by 37.24% which shows the negative relationship. Furthermore, for the financial efficiency which is total asset turnover, 1% increase in total asset turnover will increase return on asset by 48.41%. A positive significant impact has been found and researcher rejects null hypothesis. Besides that, total asset found to have a significant positive impact on profitability whereby researcher reject null hypothesis. Total asset give an impact of 32.99% on profitability in direct relationship.

From the research study, there are few recommendations suggested for the future research. Future researchers should use another test or method to interpret the data acquired. Bursa Malaysia is one of the good example sources where the accurate data can be collected and gathered.

Moreover, this research study is only focus in Malaysia. All the sample and data collected are gathered and collected in Malaysia which is publicly listed in Bursa Saham Malaysia only. As a conclusion, for future study, it had decided to do something different from the previous studies. Expand the scope of study either in Non-Asia country or Asia country can assist the researcher to gather a validity and accuracy of data. Nowadays, majority of large, medium and small company has entered in the Consumer Product activity. Other than that, the research study also can be expand to another sectors such as manufacturing, industrial products, constructions, plantations and etc.

The other variables might provide a better understanding about the factors that influencing the performance of the company nowadays. In addition, to give a better result and clearly determine the real factors for the current issue, the future research should make the research study into a different variables from previous researcher. If this study has the accurate data in determining the factor that influence the profitability of the company, this research study can be used as references and guidance especially for speculators or investors who seek the best performance of the company.

Besides that, the researcher needs to realize with the time period given in order to complete the research study. If used the panel data, the sample of year must be 10 years and longer. For example, the sample 20 years. It shows that the data will become more precise and accuracy if the longer the time period choose by the researcher. Otherwise, when the time frame is shorter, the data will become inaccurate. The disputes between the validity of data will exists.

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