

Determinants of Firms' Performance: Evidence from Non-Financial Firms in Malaysia

Norhisam Bulot, Abdul Hafiz Yusof, Nur Amirah Abdul Rahman,
Nor Arni Nazira Othman & Noor Hafizha Muhamad Yusuf
Faculty of Business and Management Universiti Teknologi MARA Perlis Branch Arau Campus,
02600 Malaysia

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Abstract

The main objective of this study is to provide further evidence on the determinants of firm's profitability in Malaysia. A better understanding of this topic is important not only for the purpose of enriching empirical studies in this field but also for the purpose of sectoral and cross-country comparison. The use data from non-financial shariah compliant firms are the unique contribution of this paper. The data for the final sample consists of 169 firms and analyzed using the panel data analysis techniques to identify the key determinants of firm's profitability. The study finds that the profitability of these firms significantly affected by the size of the firms, efficiency, and the level of sales. In addition, firms' efficiency suggested to be the most important variable affecting firm's performance. Although this paper provides empirical evidence, several areas need to be refined with future empirical research. First, this paper uses only limited number of variables, the inclusion of other firm specific variables might lead to a new set of findings and conclusion. Second, this paper has not taken into consideration the effect of using different data analysis technique. Future studies might want to explore the used of other techniques in analyzing the data.

Keywords: Profitability, VSELECT, Shariah-compliant, Non-financial, Firm's Performance

Introduction

The main objective of this paper is to investigate factors affecting firm performance. Even though, literature provides us with different views on how firm performance should be measured, the main objective of evaluating firms' performance remain the same, that is to investigate the financial stability and health of the firm. In this study, financial performance of a firm is measured by looking at its profitability. Investigating the determinants of profitability is important for the management of the companies to improve the profitability, financial stability, and financial health of the company. The literature surveys conducted shows that this research has been conducted of different sectors such as Banking (Athari and Bahreini, 2021; Derbali, 2021; Hossain and Ahamed, 2021; Khan et al., 2021; Kumar and Bird,

2020), oil and gas (Chucks and Felix 2021; Bui and Nguyen, 2021), and Automobile industry (Sharma and Verma, 2021). This research is novel and original given the fact that not many research has been conducted on non-financial shariah compliant firms. This research argues that due to its unique characteristics (non-financial and shariah-compliant) the findings of other studies cannot be generalized to this study. This article is organized into several subsections. First, we presented related works on the determinants of profitability. Then, we discussed this paper's data and methodology. Next, the analysis and results are presented along with the discussions. Finally, conclusions and suggestions for future research are provided.

Methods

Target Population

The target population of the research was all shariah compliant firms listed under trading and services sector. The final sample firms consist of 48 companies that met the criteria of non-missing data and sufficient firm-year observation over the minimum period of 5 years. The financial data were obtained from the online databases such as Eikon and DataStream.

Model and Data Measurement

The main objective of this study is to investigate the determinants of profitability for shariah compliant companies listed under the trading and services sector. This paper specifies and estimates the following model for the companies.

$$\text{PROF}_{it} = \beta_0 + \beta_1\text{LEV}_{it} + \beta_2\text{EFF}_{it} + \beta_3\text{SIZE}_{it} + \beta_4\text{LIQ}_{it} + \varepsilon_{it}$$

PROF is the profitability of the companies, measured by the return on equity (ROE). LEV is measured by the asset to equity and debt to equity ratio, EFF is the efficiency of the company measured by the fixed asset to total asset ratio, SIZE is the company's size calculated using the log of total sales, and LIQ is the liquidity of the company measured by the current ratio and quick ratio. Multiple regression and correlation methods have been used in empirical analyses.

Result and Discussion

Using the Return on Equity as the proxy for firm's profitability, this paper investigates the determinants of profitability for all shariah compliant companies listed under the consumer products sector. The summary statistics of the variables over the sample period is presented in Table 2. The average size of the profitability for the period of study is 12% and it ranges from a minimum value of 0.1% to a maximum value of 241%.

Table 1

Descriptive Statistics

Variables	N	Mean	SD	Min	Max
ROE	278	0.1228	0.1848	0.001	2.42
QR	286	1.4715	1.4482	0.1	14.26
CR	288	2.4570	2.3767	0.24	23.14
ATE	287	1.9915	1.1865	1.04	14.65
DTE	287	0.4142	0.5339	0	4.71
FATO	278	7.3459	16.4949	0.23	107.34
Log sales	261	-3.3114	1.4400	-6.908	0.40

This paper begins the analysis by determining the most optimal combination of variables to be included in the final sample. In this research, following the suggestion by Yang (2005), the four-predictor model is chosen. The chosen variables are, firm size, Efficiency, Leverage and Asset to total equity ratio. The remaining three variables (liquidity ratios - current ratio & quick ratio and debt to equity) were excluded from the subsequent analysis. The chosen predictor indicates the importance of those variables in determining the level of profitability for this sample of firms. As expected, the combination of variables in this sample is somewhat different from the literature. This difference may be attributed to the use of different data sample and proxy for both dependent and independent variables.

Table 2

Variable Selection

Models	R2ADJ	C	AIC	AICC	BIC
1	0.1413228	45.52258	-379.7774	-379.6836	-372.656
2	0.1862597	30.63558	-392.7625	-392.6057	-382.0805
3	0.262208	5.065703	-417.2508	-417.0146	-403.0081
4	0.2699167	3.386105	-418.9993	-418.6673	-401.1959
5	0.2701781	4.302068	-418.114	-417.6696	-396.7499
6	0.2680161	6.053223	-416.3706	-415.7969	-391.4458
7	0.2652666	8	-414.4255	-413.7055	-385.94

The next step is to choose the most appropriate panel data estimator. The three available alternatives are pooled ordinary least squares (POLS), fixed effects (FE), and random effects (RE) models. As presented in Table 3, the results of the F-test (p-value < 0.05), BP-LM test (p-value < 0.05) and Hausman test (p-value < 0.05) suggest that fixed effects is the most appropriate model estimator.

Table 3

Panel Specification Tests

p-values of the tests			
F-test	BP-LM	Hausman	Appropriate Technique
0.0000	0.0000	0.0000	Fixed Effects

Various diagnostic tests were then performed to check for the presence of severe multicollinearity, heteroskedasticity and serial correlation problems. As presented in Table 4, the diagnostic test results indicated the presence of heteroskedasticity (p-value < 0.05). To

rectify the problems, following the suggestion by Hoechle (2007), remedial procedure has been carried out by using fixed effects (within) regression with robust option.

Table 4

Diagnostic Tests for Static Models

p-values of the tests			
VIF	H	SC	Strategy
1.01	0.0000	0.5694	Fixed effects (within) regression with robust option

Notes: (1) VIF – Variance Inflation Factors, (2) H – heteroskedasticity, & (3) SC – serial correlation

Considering together the diagnostic tests that have been conducted and the remedial procedure undertaken, this paper may say that there is enough evidence to conclude that the examined statistical tests satisfy the key assumptions of linear regression. As shown in Table 5, the regression result suggests that the model fits the data well at the 1% level. The Adjusted R² is 48.26%. The results of the regression also suggest that firm's size, leverage, and efficiency have a statistically significant relationship with the level of profitability. From this result, it is apparent that any decrease in the firms leverage and efficiency, and a n increase in firm's size will increase the level of companies' profitability. In addition to that, company's level of efficiency seems to have the most significant influence on the level of company's profitability, which is explained by the highest t-statistic of 4.34.

Table 6

Table of findings

Determinants of Profitability	
Leverage	-0.0520*** (-4.34)
Efficiency	-0.0017* (-1.72)
Firm size	0.0144** (2.59)
Constant	0.2106*** (7.50)
Number of observations	260
Adjusted R Square	0.4826
F	11.8246
p	0.0000

Notes: (1) t statistics in parentheses & (2) * p < 0.1, ** p < 0.05, *** p < 0.01

Firm size: the main independent variables of the study is firm size. Different authors have used different proxy for firm size. Researchers such as Friend and Lang (1988); Gönenç and Arslan (2003); Deesomsak (2004), Saliha and Abdessatar (2011) have used "Total Assets" as firm size indicator. Bilkey and Tesar (1977); Holzmuller and Kasper (1991); Bonaccorsi (1992) and Archarunroj and Hoshino (1998), measured firm size using number of employees. This paper, following previous researchers such as Rajan and Zingales (1995); Wiwattanakantang (1999); Shubita and Alsawalhah (2012) used total sales as the proxy for firm size. In this paper, firm size found to have a significant positive impact on the level of profitability. This may be

explained by the fact that big firms are more effective than small firms since they make use of the scale economy. The study's results are in the same direction with (Hall and Weiss, 1967; Saliha and Abdessatar, 2011; Akbaş and Karaduman, 2012),

Leverage: It was hypothesized that there should be a significant negative relationship exist between financial leverage and firm profitability. The result of this paper show that there is a significant negative relationship exists between financial leverage and the profitability of the company. Highly leverage firms have lower profitability and lower leverage firms have higher profitability. The results of this study are consistent with the results of previous studies conducted by (Titman and Wessels, 1988; Wald, 1999; Sheel, 1994; Eunju and Soocheong, 2005).

Efficiency: In this paper, we found a significant negative relationship between efficiency of the firms and their profitability. Our result does not provide the support for the existence of a positive strong relationship between efficiency and profitability. The companies that have the capability of producing their products with the best practices are not always capable of generating the maximum profits.

Conclusion

This paper has examined the determinants of profitability for shariah compliant companies listed under the trading and services sector. The result suggests that the three explanatory variables (firm's size, leverage, and efficiency) are statistically significant. Although this paper provides empirical evidence, several areas need to be refined with future research. First, this paper did not provide a sectoral analysis on the determinants of profitability. Future research should explore whether industry or sectoral classification would have any effect on the size of profitability and its relationship with the selected determinants. Second, this paper utilizes Stata command `vselect` in determining the most optimal model. Future researchers might want to use different techniques and methods in determining the optimal model.

Corresponding Author

Nor Arni Nazira Othman

Postgraduate Student Universiti Teknologi MARA, Perlis Branch Arau Campus, 02600 Arau, Perlis Malaysia

Email: Naziraarni334@gmail.com

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