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### Will Penang Based Companies Perform Better than the Market?

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#### Abstract

This paper examines the antecedents of company's performance and compares the performance between Penang based companies and Non-Penang based companies from firm characteristics point of view for the period of 2004 to 2013. A static panel data structure is employed to examine firm characteristics' effect to firm performance. We find that the Penang based companies outperform Non-Penang based companies. Second, the previous year's performance has a positive impact to the current year's performance for Penang based companies but has a negative impact to the Non-Penang companies. Third, larger firm performs better for Malaysian public listed companies. Fourth, the Penang based companies with their larger investment in intangible assets perform better. Fifth, Malaysian public listed companies should maintain lower gearing in order to increase firm performance. Sixth, the Penang based companies with a higher growth rate and operating cash flow ratio would help in ensuring the firms perform better. Our findings could serve as an indicator in assessing firm characteristics on firm performance for Penang based public listed companies.

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## 1. Introduction

Numerous literature have been undertaken to study the performances of public listed companies in Bursa Malaysia. Unfortunately, as at today, we could not find a study that has focused on the Penang based companies by itself. Hence, this paper would like to bridge this research gap with a primary objective of providing investors a better understanding on the Penang based public listed companies. Moreover, we also do a comprehensive comparison with her Non-Penang based counterparts. This study seeks to be a significant endeavor in promoting Penang based companies to investors in Malaysia and abroad.

Penang is one of the most active states in Malaysia politically and economically. It has managed to attract a lot of foreign direct investment as well as investors and talents and continues to do so. Penang's average household income in 2012 is RM5,055 which is higher than the overall average for Malaysia (RM5,000). Penang's State Development Composite Index is the second highest after Kuala Lumpur (Hashim, 2008). Penang is one of the most developed states in Malaysia and the economy of Penang is growing strongly. Hence, this study will expose Penang based companies to the world. Essentially, this study will provide direction to future researchers in studying Penang based companies with the useful data and methodologies; it will serve as a foundation for future research.

Penang is the second smallest state in Malaysia with 1,031 square kilometers in area. Penang has contributed 6.9 % to 7.6% of Malaysia's GDP from 2008 to 2012. Penang's GDP has increased 7.8% from RM48,749 million in 2008 to RM52,530 million in 2012 (Department of Statistic Malaysia, 2013). Although the GDP growth suffered a significant drop in 2009 due to the global financial crisis, Penang recovered faster than Malaysia as a whole in the following year. Penang also recorded higher GDP growth than Malaysia in 2008 and 2010. Furthermore, Penang is ranked number four in average GDP per capital (RM33,917) from 2008 to 2012 which is higher than that of Malaysia (RM28,756) as a whole.

Penang is well known as the "*Silicon Valley of the East*" for its success in growing its electrical and electronic manufacturing industry. Penang has attracted many big multinational companies such as Intel, Motorola, Osram, Dell and Bosch which have been long established in Penang. The manufacturing sector of Penang has contributed about 50% to Penang's GDP. Penang has the lowest unemployment rate but the highest labor force participation rate from 2008 to 2012. The business environment in Penang is supported by more than 770, 550 workers where about 31% of the workforce is involved in the manufacturing industry. Penang is a favorable destination for foreign direct investment. Penang has successfully attracted investments from the United States, Europe, Japan, Korea, Taiwan, China and Singapore (Hashim, 2008).

This paper contributes to the debate of financial literature from several dimensions. First, this is the first study that empirically examines firm characteristics as main independent variables on firm performances for Malaysian firms. Second, this is a pioneer study that focuses on analyzing the performance of Penang public listed companies. Third, we make an early attempt to compare the performance between Penang based companies and Non-Penang based companies. It is hoped that the findings of this study could serve as an indicator for firms to improve their performance and for investors to make their investment decisions. Essentially, this study will provide direction to future researchers in studying Penang based companies with the useful data and methodologies; it will be served as a foundation for future research.

The remainder of this paper is organized as follows. Section 2 reviews the literature. Section 3 explains the data and methodology used in the study while Section 4 shows the empirical findings and discussions. Finally, conclusion and recommendation are presented in Section 5.

## **2. Literature Review**

The burgeoning demand of finance literature reveals extensive perspectives upon firm characteristics and its performance. These characteristics vary across firms and are comparatively vital towards firm decision making on operating, investing, financing and dividend distribution. The determinants include firm size, growth, leverage, age, research and development, tax shield (risk), tangibility and corporate governance. The scope and the direction of these characteristics as well as their impacts on firm performance are briefly extracted as below.

### *2.1 Firm Size (SIZE)*

Firm size is one of the basic and foremost variables being discussed in the previous empirical research. Large firm size allows for increased specialization within a firm and is indicative of a firm's market power. Burger et al. (2014) confirm that firm size provides a positive impact towards firm profitability. Similarly, Belderbos et al. (2004) adds that firm size has substantial effect towards enhancing organizational innovation and productivity. Moreover, Abbas et al. (2013) further confirm that firm size brings positive impact towards the textile business performance in Pakistan. Consistently, in India, Majumdar (1997) discovers that large firms are less productive but more profitable as compared to small firms. Therefore, this study believes that firm size is significantly related to its performance.

### *2.2 Tangibility (TANG)*

As for tangibility, theory generally holds that tangibility is negatively related to firm performance, i.e., firms with high proportions of intangible assets are expected to grow faster than firms with low proportions of intangible assets. However, Williamson (1988) suggests that firm performance should decrease with liquidation value, so that firm performance should be positively correlated with tangibility. Hence, we believe that tangibility will bring significant impact to firm performance.

### *2.3 Leverage (LEVE)*

Leverage is a common business strategy of using loaned funds in generating outsized returns. Abbas et al. (2013) conclude that both short and long term leverage shows negative correlation with firm performance. Consistent findings are found by several studies (Huynh and Petrunia, 2010; Vithessonthi and Tongurai, 2013) indicating leverage is negative and significant towards the effect of firm performance. Thus, the study believes that firm leverage brings significant effect to its performance.

### *2.4 Risk (RISK)*

Since high risk brings high return, Loderer and Waelchli (2010) signify positive correlations between risks towards margins and ROA. Abbas et al. (2013) further explain that riskier firms tend to perform better, whereby non-debt-tax shield (depreciation) is significant in enhancing firm performance.

### *2.5 Growth (GROWTH)*

Titman and Wessels (1988) suggest that a firm's growth opportunity is a good proxy for the agency costs of debt and indicates flexibility in investment, leading to strong performance. At the same time, growth opportunity is a proxy for available internal funds. A firm can use its internal funds to continue its operations in times of financial distress; thus, a strong cash balance is found to correlate with better performance (Morck et al., 1988). Furthermore, Fuller and Jensen (2002), Ramezani et al. (2002) and Abbas et al. (2013) also propose that growth has positive impact towards firm performance. With that, the study suggests a significant relationship on firm's growth to its performance.

### *2.6 Operating cash flow (OCF)*

In the absence of asymmetric information, the relationship between cash flow and performance is positive. Dechow (1994) confirm that that firm's cash flow from investment, operating and financing activities are relatively constructive measure for firm performance. However, as magnitude of accruals increases, cash flows will severely suffer from matching and timing problems. Hence, we believe that operating cash flow will bring significant impact to firm performance.

In the case of Malaysia as a single country study, majority of the existing empirical studies classify the antecedents in a few areas: (a) Corporate Governance (Haniffa and Hudaib, 2006; Hassan Che Haat et al., 2008); (b) Ownership Structure (Tam and Tan, 2007; Anum Mohd Ghazali, 2010); (c) Industrial Diversifications (Lee et al., 2012). No study investigated the direct impact of firm characteristics as main independent variables on its performance. Therefore, we attempt to further investigating this relationship in Malaysia with the updated data and improved methodology.

## **3. Data and Methodology**

### *3.1 Source of Data*

As at 1 May 2014, there are 812 companies listed in the main board of Bursa Malaysia. The total population consists of 63 Penang based companies (8%) and 749 Non-Penang based companies (92%). We identify the Penang based companies by the company's addresses (i.e. registered office address and principal business office address) that are published in their annual reports and websites. In order to sort and sieve out the Penang based companies, we obtained the addresses of all companies from the company's annual reports. The sample period of study is ten years from January 2004 until December 2013 and we employ an unbalanced panel data.

### *3.2 Variables and Measurement*

We explain the dependent variable and independent variables in this section. Firm performance is our dependent variable. There is a wide literature on the appropriate measurement of performance and this literature has led to little consensus on the best approach to take. This paper uses return on assets (ROA) and return on equities (ROE) as the measurement of performance. ROA is calculated by dividing a company's annual net income by the total value of its assets, it is a widely used measure of firm performance (McConnell and Servaes, 1990; Anderson et al., 2003). As for ROE, it is computed as sum of the market value of a firm's equity and book value of the firm's debt (i.e., book value of long-term debt +

book value of short-term debt) divided by the replacement value of the firm's assets (Core et al., 1999).

In term of independent variables, the study explores firm characteristics from various perspectives. These characteristics differ across firms due to the different policy in terms of operating, investing and financing activities. Based on the previous literature, the study uses firm size, tangibility, leverage, risk, growth and operating cash flow as firm characteristics to enhance the empirical regression model. The natural logarithm of total assets is generally used to measure SIZE (Rajan and Zingales, 1995; Deesomsak et al., 2004; Ang and Ding, 2006). TANG is the ratio of tangibility assets (the sum of fixed assets and inventories) to total assets (Ting and Lean, 2011). LEVE is computed as the book value of total debt divided by total assets. This indicator captures the characteristics of firm's indebtedness (Anderson and Hsiao, 1981; Rajan and Zingales, 1995). RISK is the ratio of total depreciation to total assets (Core et al., 1999). Following Rajan and Zingales (1995), GROWTH is measured as the annual percentage change in total sales. OCF is the ratio of total operating cash flow divided by total assets (McLaughlin et al., 1996). Following Olivero et al. (2011), we also add time effect variable ( $\sum \alpha_i Year_i$ ) to control for time-specific factors. Thus, to examine the impact of firm characteristics on its performance, we establish Model 1 as follows:

$$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TANG_{it} + \beta_3 LEVE_{it} + \beta_4 RISK_{it} + \beta_5 GROWTH_{it} + \beta_6 OCF_{it} + \sum \beta_i Year_i + \varepsilon_{it} \quad (1)$$

where subscripts i and t represent the firm and time respectively.  $\beta_i$ ,  $i = 1$  to 6, are coefficients of the respective independent variables;  $\varepsilon_{it}$  is error term.

We establish Model 2 for robustness check by considering another measure of firm performance, i.e. ROE in replacing ROA.

$$ROE_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TANG_{it} + \beta_3 LEVE_{it} + \beta_4 RISK_{it} + \beta_5 GROWTH_{it} + \beta_6 OCF_{it} + \sum \beta_i Year_i + \varepsilon_{it} \quad (2)$$

#### 4. Result and Findings

The mean of ROA and ROE is 0.036 and 4.583 respectively. The average firm size of 5.57 shows that total assets of firm is RM57.7 million in average. About 51.70 per cent of firm's total assets are made up of fixed assets. The average total debt to total assets for the observed period is about 21.40 per cent. The risk is about 2.80 per cent. Moreover, the Malaysian firms have an average growth rate of 68.80 per cent. Finally, firm average operating cash flow for the observed period is about 849.20 per cent. The statistics show that our sample firms do not cluster in any specific area.

In order to compare the performances between Penang based companies and Non-Penang based companies, we provide an additional set of findings: means test (Table 1). Table 1 shows that the Penang based companies outperform Non-Penang based companies in terms of ROA and ROE but the tests of difference are insignificant. Moreover, the significant and negative t-statistics on SIZE implies that the Non-Penang based companies are significantly larger than the Penang based companies. In terms of TANG, the significant and positive t-tests indicate that the Penang based companies have more tangible assets than her Non-Penang counterparts. Nevertheless, the significant and positive t-statistics for RISK implies that the Penang based companies are significantly facing higher risk than the Non-Penang

based companies. We also observe that the Penang based companies have lower debt and growth rate and higher operating cash flow than the Non-Penang companies but the results are insignificant.

Table 1: Tests for differences in means between groups, for dependent and explanatory variables

Variables	Group	Mean	t-stat
ROA	Penang	0.039	0.634
	Non-Penang	0.023	
ROE	Penang	5.805	0.449
	Non-Penang	4.352	
SIZE	Penang	5.312	-10.663**
	Non-Penang	5.618	
TANG	Penang	0.534	1.855*
	Non-Penang	0.514	
LEVE	Penang	0.220	-0.451
	Non-Penang	0.229	
RISK	Penang	0.032	4.800***
	Non-Penang	0.027	
GROWTH	Penang	0.181	-1.090
	Non-Penang	0.885	
OCF	Penang	10.545	0.296
	Non-Penang	10.329	

Simple pooled regression (OLS) cannot adjust for firm-specific or time-specific effects. Panel regression techniques i.e. fixed effect model (FEM) and random effect model (REM) can solve this problem. To determine the most appropriate model for the estimation, we first check whether panel data estimation is more suitable in this study. Hence, the Breusch and Pagan (1980) Lagrange Multiplier (LM) test for cross-sectional dependence is conducted. Next, a Hausman test (Greene, 2003; Wooldridge, 2010) is conducted to decide whether to employ a FEM or a REM model in the regression analysis. The Hausman test statistics with a p-value of less than 0.05 suggests the use of a fixed effect specification. In the FEM model, the differences across firms are dealt with by allowing firm-varying intercept when estimating the model. We also check heteroscedasticity for the residuals of our models by conducting White (1980) test. For robustness check, we report both pooled OLS and FEM regressions results for Model 1 in Table 2.

Table 2: Panel regressions

Model 1:				
$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TANG_{it} + \beta_3 LEVE_{it} + \beta_4 RISK_{it} + \beta_5 GROWTH_{it} + \beta_6 OCF_{it} + \sum \beta_i Year_i + \varepsilon_{it}$				
	Penang		Non-Penang	
	OLS	FEM	OLS	FEM
Intercept	-0.007* (-1.70)	-0.070* (-1.729)	-0.154*** (-5.162)	-0.126*** (4.236)
SIZE	0.002*** (3.030)	0.013*** (3.280)	0.019*** (8.402)	0.019*** (8.594)
TANG	-0.034* (-1.776)	-0.039** (-2.017)	0.051*** (3.931)	0.053** (4.116)

LEVE	-0.100*** (-5.282)	-0.100*** (-5.241)	-0.363*** (22.258)	-0.365*** (-26.112)
RISK	-0.047 (-0.414)	-0.049 (-0.428)	0.094 (0.726)	0.098 (0.762)
GROWTH	0.022*** (4.287)	0.022*** (4.542)	0.003 (0.200)	0.002 (0.347)
OCF	0.021*** (2.774)	0.002*** (2.692)	0.002 (0.420)	0.001 (0.561)
Year dummy	Yes			
Adj R <sup>2</sup>	0.150	0.149	0.104	0.106
F-Stat	17.156***	7.452***	119.240***	49.505***
Note: t-statistics in brackets, *, **, and *** denote the statistical significance at the 10, 5 and 1 per cent levels respectively.				

As for SIZE, the positive coefficients for both samples show that firm with larger size in terms of assets perform better. The result is consistent with Burger et al. (2014) who argue that firms may attain better performance from an increase in size due to economies of scale, more promotional opportunities, improved efficiency in assets and other operational synergies. The negative coefficients of TANG for Penang based companies confirm that firms with low proportion of tangible assets are expected to grow faster than firms with high proportions of tangible assets. This could be due to the nature of Penang based companies in the electrical and electronic manufacturing industry that are more related to intangible assets. However, the Non-Penang based companies have contradicted result which is consistent with Williamson (1988). Akintoye (2008) argues that firms that retain large investment in tangible assets incur smaller cost during financial distress than firms that rely on intangible assets. Hence, an increase in TANG should contribute to firm performance for its lower investment risk.

We also find a significantly negative relationship between LEVE and firm performance for both samples, suggesting that lower debt levels positively affect performance. This is consistent with Grossman and Hart (1986), Harris and Raviv (1990) and Zantout (1997) who agree that firm with higher gearing will reduce its performance. A positive coefficient of GROWTH for Penang based companies demonstrates that a firm's growth opportunity is a good proxy for the agency costs of debt and indicates flexibility in investment, leading to strong performance. The result is consistent with Fuller and Jensen (2002), Ramezani et al. (2002) and Abbas et al. (2013). Consistently, Penang based companies with higher operating cash flow ratio brings significantly positive impact to the performance.

For robustness check, we estimate Model 2 by replacing ROA with ROE. The untabulated results<sup>1</sup> for both samples remain qualitatively the same.

## 5. Conclusion

This study examines the antecedents of company's performance and compares the performance between Penang based companies and Non-Penang based companies from firm characteristics point of view. The findings are summarized as follows. First, the Penang based companies outperform Non-Penang based companies. Second, larger firm performs better for

<sup>1</sup> Result is available upon request.

Malaysian public listed companies. Third, the Penang based companies with their large investment in intangible assets perform better. Fourth, Malaysian public listed companies should maintain lower gearing in order to increase firm performance. Fifth, the Penang based companies with a higher growth rate and operating cash flow ratio would help in ensuring the firms perform better.

This research provides several important implications by investigating several firm characteristics to its performance. It is hoped that the findings of this study could serve as an indicator in assessing the impact of firm characteristics on its performance for Penang based public listed companies.



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