DOES ORGANIZATIONAL GROWTH CONTRIBUTE TO PROFITABILITY? EVIDENCE FROM MALAYSIAN PUBLIC LISTED COMPANIES

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ABSTRACT

This paper aims to examine the impact of organizational growth on the profitability of Malaysian public listed companies for the period of 2001-2010. The sample consists of a balanced panel data of 240 companies from various sectors listed on the Main Board of Bursa Malaysia. The study develops multiple regression models to test the impact of organizational growth on firm performance. The results reveal that organizational growth has an impact on profitability. Two independent variables, viz. total assets growth and fixed assets growth, are found to be significantly affecting the performance of our sample firms. These findings may reveal that Malaysian public listed firms should particularly focus on total assets growth and fixed assets growth to maximize their returns.

Keywords: Organizational Growth; Profitability; Malaysian Public Listed Firms.

1. INTRODUCTION

Firm growth is critical to the economy development, especially for developing country (Sanghamitra, 1995). Malaysia is widely recognized as an emerging market and has been promoted from Secondary Emerging market status to Advanced Emerging market status in June 2011 (FTSE, 2010). During 2001 to 2008, Malaysia recorded annual average economic growth rate of 5% and she appears to be a consistent performer in the ASEAN region (Datamonitor, 2010). Moreover, the Malaysian economy shows strong sign of recovery in 2010 after the global economic crisis as a result of strong growth in exports and imports; it is expected that the industrial production growth will persist in the future (Datamonitor, 2010). Turning to the micro perspective, the asset growth rates for Malaysian companies reported in Watanabe, Xu, Yao, and Yu (2011) is approximately 8 %, which is well above the average

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of all international firms of 6.8%. The profitability persistency of individual firms in seven developing nations including Malaysia is proven to be lower than that of other developed countries, which suggests higher intensity of competition (Glen, Lee, and Singh, 2003). To remain competitive and to ensure sustainable profitability, firms should thus grow at a stable pace as there is a widespread presumption that firm growth is closely linked to profitability (Jang and Park, 2011).

Growth process, however, is non-stationary (Sanghamitra, 1995) and the variability of growth rate is high and unpredictable (Geroski, Machin, and Walters, 1997). Despite the fact that growth is highly unpredictable, firm can achieve growth through different ways so one single growth indicator is unable to measure multidimensional growth (Delmar, Davidsson, and Gartner, 2003). This reason is the first motivating factor of this study to employ four different growth measures, namely sales growth, total asset growth, fixed asset growth, and employment growth to examine the impact of organizational growth (Delmar et al., 2003) on firm performance. The second motivating factor is that the research on the relationship between organizational growth and the profitability of Malaysian public listed firms is less voluminous. We seek to provide empirical evidence on this part. Our research question is relevant to management who may be interested in knowing the benefits of different types of growth. The findings of this study may provide some insights to management in steering the corporate growth strategies of firms.

The rest of this paper is organized as follows. Section 2 reviews the prior literatures. Section 3 presents the data and methodology, while Section 4 shows the empirical findings and discussion. Finally, conclusion and recommendation are presented in Section 5.

2. LITERATURE REVIEW

The empirical evidence on the impact of growth and firm performance is very limited and there is no specific pattern of relationship between growth and firm performance from prior studies.

The study of the relationship between growth and firm performance dates back to the study done by Gupta (1969), which focuses on the effects of growth on various financial ratios including profitability ratios. The author classifies the U.S. manufacturing companies into growth group and non-growth group based on annual average compounded growth rate in the industry sales. The research findings, however, reveal no significant association between sales growth and profitability. In contrast, Geroski et al. (1997) report a positive association between sales growth and changes in expectation of future profitability, i.e. market value. The insignificant results in the former study are attributed to the classification bias by pooling together growth and non-growth companies based on merely industry sales growth (Gupta, 1969). In fact, sales growth is frequently synonymised with profitability (Brush, Bromiley, and Hendrickx, 2000). In a study focusing on a growing infant industry in India, the computer hardware industry, Sanghamitra (1995) find that greater firm growth, as measured by growth in natural logarithm of sales, corresponds to increase in firm age; but, firm size has negative impact on firm growth.

While the previous mentioned studies provide evidence that sales growth is associated with firm profitability, Delmar et al. (2003) argue that sales is sensitive to inflation and currency exchange rates. Thus, they incorporate employment growth in addition to sales growth in their study. Besides, employment growth also captures managerial growth. Another growth indicator that is often used in empirical studies is asset growth. Their findings show that the different firm growth patterns used are related to firm age, firm size, and industry affiliation. Cooper, Gulen, and Schill (2008), Gray and Johnson (2011), and Watanabe et al. (2011) show that total asset growth is negatively related with future stock returns for the U.S., Australian, and international sample, respectively.

Chung, Wright, and Charoenwong (1998) have also documented that growth in fixed assets plays an important role in investors' perspective on firm performance. More specifically, their paper examines the effects of capital expenditure increments on stock price. They find evidence supporting that the changes in stock price subsequent to increases in capital expenditure is conditional on the quality of investment opportunities. Based on the above discussion, we predict that growth in a firm would result in greater performance.

3. DATA AND METHODOLOGY

3.1. *Source of Data*

All companies listed in the Main Board of Bursa Malaysia as at 31 December 2010 are selected as sample. Finance, insurance, and unit trust companies are excluded due to the differences in regulatory requirement. After screening firms with missing data, the sample left is 240 companies. The sample period is from 2001 to 2010. The dataset are compiled from Bursa Malaysia's online database (www.klse.com.my).

3.2. *The Variables*

The independent variables, dependent variable, and control variables used to justify the above-mentioned relationship are explained in the following subsections.

3.2.1. *Independent Variables*

(i)   *Sales growth (SG)*

Prior studies on organizational growth have shown that sales growth is the most popular measure. Most of the researchers have used sales growth as a measure of firm growth. Fitzsimmons, Steffens, and Douglas (2005) also find that more than 60% of their 82 reviewed articles use sales growth as their measure of firm growth. We measure sales growth as follows:

$$SG = (Sales_t - Sales_{t-1})/ Sales_{t-1}$$

(ii)   Total assets growth (TAG)

Growth in total asset is another useful firm growth measurement. Total asset growth rate retains large explanatory power for future firm returns after accounting for firm size, book-to-market ratio, and momentum. In fact the total asset growth effect is at least as powerful in explaining returns as other widely used factors (Gray and Johnson, 2011). The measure is calculated as follows:

$$\text{TAG} = (\text{Total assets}_t - \text{Total assets}_{t-1}) / \text{Total assets}_{t-1}$$

(iii)   Fixed assets growth (FAG)

Growth in fixed asset is another useful firm growth measurement on top of total asset growth. Fixed asset growth rate can generate more return for a firm and is thus used as a measurement for firm growth in this study.

$$\text{FAG (t)} = (\text{Fixed assets}_t - \text{Fixed assets}_{t-1}) / \text{Fixed assets}_{t-1}$$

(iv)   Employment growth (EG)

The number of employees has been considered as one of the measurement of firm growth. Employment growth is one of the area to look into as increasing in the number of employees is a key indicator of firm production line, which reflects the growth of a firm (Delmar et al., 2003).

$$\text{EG (t)} = (\text{Employees}_t - \text{Employees}_{t-1}) / \text{Employees}_{t-1}$$

3.2.2. Dependent Variables

Return on assets (ROA) and return on equity (ROE) are used as the dependent variables of this study. ROA is a common measure of profitability in strategy research (Goddard, Tavakoli, and Wilson, 2009). This study measures ROA by dividing profit after tax by year-end total assets. ROE is calculated by dividing profit after tax by the shareholder equity (Onaolapo and Kajola, 2010).

3.2.3. Control Variables

(i)   Firm age (FAGE)

Firm age is related with firm dynamics, such that firm age affects firm performance. Without doubt, firms are aware of their strength and opportunity in dealing with business as they getting older may perform better than the infant firms. In the light of this, firm age is used as a control variable (Soininen, Martikainen, Puumalainen, and Kyläheiko, in press).

$$\text{FAGE} = \text{From the time of incorporation.}$$

(ii) *Firm size (FSIZE)*

Firm size is taken as another control variable because the impact of firm size on performance is always assumed to be that larger firm can use their resources more efficiently and thus the risk is lower. This will generally increase firm performance (Jang and Park, 2011).

$$\text{Firm Size} = \text{Ln (MV)}$$

3.3. Research Model

In respond to the research objective, this study tests empirically the following multiple regression model.

$$ROA_{it} = \alpha_0 + \alpha_1 SG_{it} + \alpha_2 TAG_{it} + \alpha_3 FAG_{it} + \alpha_4 EG_{it} + \alpha_5 FAGE_{it} + \alpha_6 FSIZE_{it} + \varepsilon_{it} \qquad (1)$$

$$ROE_{it} = \lambda_0 + \lambda_1 SG_{it} + \lambda_2 TAG_{it} + \lambda_3 FAG_{it} + \lambda_4 EG_{it} + \lambda_5 FAGE_{it} + \lambda_6 FSIZE_{it} + \varepsilon_{it} \qquad (2)$$

where α_0 and λ_0 is the constant term of Model 1 and Model 2, respectively. ε_{it} is the error term.

4. EMPIRICAL FINDINGS

4.1. Descriptive statistics

Table 1 shows the descriptive statistics of dependent variables and explanatory variables. The average sales growth rate is 34.1%, while average fixed asset growth rate is relatively high at 162.5% as compared with total asset growth rate at 10.9%. The mean for employment growth is 17.6%. The average firm size is 5.518 and the average age of the samples firms is about 22 years old. The result shows that the mean for ROA is quite high at 160.1% as compared to ROE at 20.2%. The above analysis shows that the selected companies have high mean ROA. In terms of growth, our sample companies focus more on growing their fixed assets.

Table 1: Descriptive statistics

Variable	Mean	Std Dev	Minimum	Maximum
ROA	1.601	14.776	–171.36	152.78
ROE	0.202	35.663	–463.19	215.76
SG	0.341	6.580	–1.00	290.45
TAG	0.109	1.763	–0.92	63.36
FAG	1.625	71.104	–25.45	3480.00
EG	0.176	3.494	–0.94	133.67
FSIZE	5.518	1.509	0.72	10.63
FAGE	22.146	12.626	1.00	49.00

Notes: ROA is the return on assets. ROE is the return on equity. SG is sales growth rate. TAG is total assets growth rate. FAG is fixed assets growth rate. EG is employment growth rate. FSIZE is the natural logarithm of a company's market value. FAGE is the number of years a company is listed.

Table 2 reports the Pearson correlation coefficients. Total assets growth (TAG) and fixed assets growth (FAG) are significantly and positively related to ROA. Meanwhile, we only find a significantly positive correlation between total assets growth (TAG) and ROE. Other correlation coefficients are all lower than 0.5. Besides, the maximum value of untabulated variance inflation factors (VIF) is about 2.0. These results suggest that there is no multicollinearity problem for multivariate analysis.

Table 2: Pearson correlation coefficients

Variable	ROA	ROE	SG	TAG	FAG	EG	FSIZE
ROE	0.485***						
SG	0.012	0.002					
TAG	0.057***	0.036*	0.031				
FAG	0.040*	0.020	0.000	0.039**			
EG	0.013	0.006	0.024	0.316***	0.003		
FSIZE	0.366***	0.360***	-0.008	0.007	-0.027	0.008	
FAGE	0.037*	0.016	0.016	-0.019	0.042**	-0.002	0.216***

4.2. Regression Results

Apart from checking for multicollinearity problem, we also check heteroskedasticity for our residuals using White (1980) test and we do not find any evidence of heteroskedasticity. Table 3 presents the results of regression analysis. All models are significant at the 0.01 significance level, which are with an adjusted R-squared of about 0.150, respectively. From Eq. (1), the result shows that sales growth (SG) has a positive relationship with ROA but the coefficient is insignificant. The result is consistent with Velnampy and Nimalathasan (2008) but is contrary to Fitzsimmons et al. (2005). This may be due to the fact that sales itself serves as a measure of potential profitability. The coefficient of employment growth (EG) is also positive and insignificant. The finding is the same as Fitzsimmons et al. (2005). This finding suggests that an increase in the number of employees does not necessarily guarantee generation of higher profit. Among the growth measures, the coefficients on total assets growth (TAG) and fixed assets growth (FAG) are significant and positive. The results are consistent with Huggett and Kaplan (2011) because higher sales could be generated by the growth of assets, which inevitably contributes to firm performance. Firm size (FSIZE) has a significant and positive relationship with ROA. The result is consistent with Onaolapo and Kajola (2010). However, the result shows that firm age (FAGE) is significantly and negatively related to ROA. The finding is in line with Soininen et al. (in press). Eq. (1.1) to Eq. (1.4) provide the similar results. Furthermore, in Table 4, the regression analysis with ROE being used as the dependent variable also shows the same findings but the coefficients reach a weaker significance level.

Table 3: Regression results (DV=ROA)

Variables	(1) Coefficient (*t* statistic)	(1.1) Coefficient (*t* statistic)	(1.2) Coefficient (*t* statistic)	(1.3) Coefficient (*t* statistic)	(1.4) Coefficient (*t* statistic)
Intercept	−15.844***	−15.648***	−15.616***	−15.874***	−15.622***
	(−9.55)	(−9.42)	(−9.41)	(−9.56)	(−9.40)
SG	0.038	0.041			
	(0.90)	(0.97)			
TAG	0.437***		0.465***		
	(2.62)		(2.94)		
FAG	0.011***			0.011***	
	(2.79)			(2.90)	
EG	0.008				0.080
	(0.09)				(1.00)
FSIZE	3.945***	3.922***	3.912***	3.949***	3.921***
	(19.44)	(19.30)	(19.28)	(19.44)	(19.30)
FAGE	−0.104***	−0.101***	−0.100***	−0.104***	−0.103***
	(−3.74)	(−3.64)	(−3.61)	(−3.75)	(−3.66)
Industry dummy	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.152	0.147	0.150	0.150	0.147
F-statistic	18.93***	20.75***	21.18***	21.17***	20.75***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

4.3. Robustness Check

As a robustness check, we reestimate Equations (1) using fixed-effects panel data regression and panel data generalized method of moments (GMM). As shown in Table 5, only the coefficients of total assets growth (TAG) and fixed assets growth (FAG) are significantly positive under the fixed-effects model and the 'differences GMM' estimation. This finding corroborate the results in Tables 3 and 4, suggesting that total assets growth and fixed assets growth but not sales growth and employment growth would result in higher performance.

Table 5: Regression results – Sensitivity analysis

Variables	Fixed-effects		Differences GMM	
	Coefficient	*t* statistic	Coefficient	*t* statistic
Intercept	–36.714	–1.64		
SG	0.027	0.67	0.009	0.30
TAG	0.621***	3.89	3.941***	2.95
FAG	0.012***	3.06	–1.915***	–3.51
EG	0.100	1.24	–0.057	–0.29
FSIZE	–0.136***	–2.09	13.681***	5.46
FAGE	4.790***	14.74	0.030	0.05
Industry dummy	Yes			
Year dummy	Yes			
Adjusted R^2	0.296			
F-statistic	4.85***			
	(0.00)			
J-statistic			36.14	

Notes: *** indicates that the estimated coefficient is significantly different from zero at 1 percent.

5. CONCLUSION AND RECOMMENDATION

This paper studies the relationship between organizational growth and firm performance using a sample of 240 firms listed on the Main Board from different sectors of Bursa Malaysia from year 2000 to 2010. In this study, several different growth variables are used as growth measures. The dependent variables included in this study are ROA and ROE. The regression results show that TA growth and FA growth have positive and significant impacts on firm performance. The results are consistent with the prior study of Huggett and Kaplan (2011) and Soininen et al. (in press), who conclude that TA growth and FA growth are significant contributors in generating higher returns. In conclusion, the objective of this study is achieved where organizational growth does play its role in generating higher profitability for a firm. In terms of future research, this paper suggests the inclusion of other growth factors such as growth in cash flow and dividend.

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