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Factors determining growth of companies: A study on construction companies in Malaysia

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Most firms in general have multiple objectives aimed to sustain and succeed in their business. In the short term, firms pay more attention to profit maximization. For the long term however, profit is no longer the prime focus because one of the objectives which may dominate the management of a firm is its growth. The objectives of this paper are to establish factors determining growth of construction companies in Malaysia and also to establish which factors have greater impact on growth. Data collection for the purpose of this study was done through a questionnaire survey which was carried out involving large construction companies from grade G7 as classified under the Construction Industry Development Board of Malaysia (CIDB). Questionnaires were sent to 600 respondents via postal service and by hand. From 600 questionnaires disseminated, 102 of the questionnaires were returned, completed and useable. Data was analyzed by using relevance statistical methods such as frequency, relative important index (RII) and regression analysis to establish findings. Findings of this research show that the good management of a company was found to be the utmost important factor that contributes to the growth of construction companies. Effective organization structure, use of new technology and automation as well as commitment to customers' satisfaction had a good correlation with employment growth. It was also found that market specialization; good company management, availability of bank loans and other credit facilities and use of new technology as well as automation are significant factors towards growth in turnover.

Key words: Construction companies, growth, Malaysia.

INTRODUCTION

The construction industry is dynamic in nature and its environment has become more dynamic due to increasing uncertainties in technology, budgets and development process (Chan and Chan, 2004). As a complex industry comprising a wide array of firms, discipline and practices, change to the organization and activities of the sector might be beneficial to some, but disadvantageous for others (Harty et al., 2006). Change is a continuous process and as such, the firm must be in a position to respond continuously to changing environmental conditions. Not all firms are equally able to change (Pettus, 2003). In the face of these changes, it is

increasingly difficult to manage the construction business in today's environment (Betts and Ofori, 1992). Churchill (1997) accentuates the fact that businesses must understand the pressure to grow so that they can plan and prepare for it, choose the right timing for expected major changes in size and control the speed of growth. Recklies (2001) also added that growth has to be part of the corporate development. It has to take into account internal resources and external forces, and, ideally, it is a planned part of the corporate strategy.

The assumption of the traditional economic theory is that firms will pursue an objective of profit maximization. However, according to Weinzimmer (2000), organizations can benefit from growth in many ways, including greater efficiencies through economies of scale, increased power, the ability to withstand environmental change, 8754 Afr. J. Bus. Manage.

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profits increased increased and prestige for organizational members. As noted by Bonaccorsi and Giannangeli (2008), growth does not come at zero cost for firms. A firm's decision to grow is essentially the result of an assessment regarding the profitability of a new market opportunity. Hisatomi (1990) emphasize that efficiency, effectiveness, reputation as well as increasing market share is important for the survival of a firm. Contracting is a very complex business, yet it is relatively easy to be registered as a contractor in Malaysia. The Construction Industry Development Board of Malaysia or CIDB (2006) noted that low barriers to entry into the industry have swollen the ranks of contractors with many small scale companies registered as grade G1 contractors under the CIBD grade of registration with G1 being the entry level grade. This grading of contractors, from G1 to G7, is also directly commensurate to the magnitude of projects the contractors may be involved in. Currently, there are approximately 64,000 contractors registered with CIDB, out of which approximately 57% are G1 grade contractors (CIDB, 2008). According to Ghani (1988), the failure rate and bankruptcies in construction companies in Malaysia are high. During the economic crisis of the 1980s and 1990s, many Malaysian construction companies and contractors especially those that were Bumiputera (comprising of individuals of Malay indigenous descent) owned, successfully execute their construction projects and had to diversify into other business activities. Contractors of the lower grades suffered more hardship than their higher counterparts, which led them to total bankruptcy (Ghani, 1988). In his study, Abu Bakar (1993), found that most construction companies in Malaysia started as small, local market companies during the 1970 to 1980s period of construction boom. They expanded at different rates and levels of success and growth. About a quarter failed to progress beyond the local level, and one-third made the local-regional-national transition in 3 to 5 years. In recent years, with the completion of 'mega-projects' and subsequent economic prudence, local projects were insufficient to sustain the 70,000 odd contractors. Thus, many of the lower ranking contractors have left the industry (CIDB, 2006). This leads to the question of why is there inconsistency in growth among construction within companies the Malaysian construction industry. The objectives of this paper are to establish factors determining growth of construction companies in Malaysia and also to seek which factors play a more important role in determining growth.

FIRM GROWTH

In her seminal book, Penrose (1959) characterizes the phenomenon of growth in firms and companies as follows:

"The term 'growth' is used in ordinary discourse with two different connotations. It sometimes denotes merely increase in amount; for example, when one speaks of growth in output, export, and sales. At other times, however, it is used in its primary meaning implying an increase in size or improvement in quality as a result of a process of development, akin to natural biological processes in which an interacting series of internal changes leads to increases in size accompanied by changes in the characteristics of the growing object".

Penrose's original contribution in 1959 shaped the direction of growth. From a totally 'inside-out' perspective, firm's growth is now conceived as the endogenous outcome of perennial intra-firm knowledge creation (Volpe and Biferali, 2008). Firm growth demands the ability to master technologies, engender labor skill, organize the production process as well as efficiently serve a market. A firm will exploit a growth opportunity as long as the benefits outweigh the costs, given the level of ability with which the firm was endowed at start-up (Bonaccorsi and Giannangeli, 2008). According to Skrt and Antoncic (2004), in order for the firm to grow, the entrepreneur needs to formulate an exact, clear mission and vision for his or her firm. Strategic planning can be considered important in driving firm growth.

Precisely formulating visions and strategy, incorporating the elements of internationalization and networking in the firm vision, focusing on growth, profit, and market, performing analyses of market and competition, accurately formulating generic business strategies and achieving company wide support for strategies can all be beneficial for the growth of smaller firms. Weinzimmer (2000) has concluded that many researchers have examined the influence of strategy factors on organizational growth; the relationship between characteristics of top management and organizational growth; strategy and industry characteristics on organizational growth; and industry and top management characteristics on organizational growth. In his conclusion, three sets of determinants had been identified; namely, industry attributes, organization strategies and top management characteristics. Moreover, according to Schneider et al. (2007), it has been suggested in the literature that employee development is especially important for startup companies to achieve organizational performance and in particular high growth.

Bonaccorsi and Giannangeli (2008) have concluded that the relationship between initial size and growth is more complex. By specifically, considering very small firms in the sample, there is evidence of a positive relationship, suggesting that there is a minimum size below which no growth whatsoever occurs. Entrepreneurs' competencies may be a triggering factor only if they are associated with larger initial size. True growth is more than adding something to the company – people,

office space, sales force (Recklies, 2001). Firm growth is a multidimensional construct that can include increases (1) in asset and employment size, (2) in sales volume and profitability, as well as (3) in the variety of business functions, products and services.

MEASURES OF GROWTH

The field of measurement is required and needs to be recognized in order to ensure the quality of almost any industry; to identify factors affecting quality; and to measure growth (Rossi et al., 2002). Growth can be seen as a very important measurement of firm performance. According to Baum et al. (2001), firm growth is frequently equated with success. Rossi et al. (2002) added that measurement of growth is somehow at a turning point nowadays. The total quality paradigm is a good reference as it essentially means active participation of all involved subjects within an organization. Firms size is measured in terms of total number of workers, including employees, founders, and contract workers (Bonaccorsi Giannangeli, 2008). A firm's growth can be measured in terms of inputs (investment funds, employees), in terms of the value of the firm (assets, market capitalization, economic value added elements) or outputs (sales, revenues, profit). Each of the measures illustrates some feature of growth and each is subject to limitations as a growth indicator.

Input, output and value growth in a firm may not be aligned, and so diverse growth measures should not be expected to correlate. The relationship between growth, size and age of firms is very sensitive with respect to the definition of growth and size (Stam et al., 2006).

FACTORS CONTRIBUTING TO FIRMS' GROWTH

There are several factors that contribute to firms' growth. It differs between small and large firms and also may vary from country to country, depending on their economic, geographical and cultural differences. In the study on small business growth, Morrison et al. (2003) noted that human factor was considered to be the overwhelming force that determines whether a business will prosper or not. Hillebrant and Cannon (1990) identify management as the most important determinant of the capacity as well as capability of construction firms. They suggest that construction particularly management-intensive because of the large number of decisions which is require to be taken from day to day, on site as well as within the organization. Based on the study of small firms in the island nations of the South Pacific, Yusuf (1995) found that good management, access to financing, personal qualities of the entrepreneur, and satisfactory Bakar et al. 8755 government support were the most important factors to success.

Abu Bakar (1993) examined the factors affecting growth of construction companies in Malaysia and found that good financial backing; good cash flow management, technical expertise and good company management as some of the key factors that contribute to the success of companies. In the manufacturing industry, Wjewardena and De Zoysa (2005) have identified six principal factors that are perceived to be major contributors to the success or growth of manufacturing firms in Sri Lanka. These factors, in their order of importance, are customer orientation, product quality, efficient management, supportive environment, capital accessibility and marketing strategy. Meanwhile CIDB (2006) has identified 8 critical success factors that are pertinent for a successful business in the construction industry, which include productivity, quality, human resources, innovation, environment friendly practices, knowledge, industry sustainability and professionalism.

ANALYSIS OF GROWTH FACTORS

Based on the literature review relating to firm growth, twenty-seven growth factors that were listed by researchers have been selected. These factors were used for the purpose of establishing growth factors for construction companies in Malaysia. A detailed analysis of growth factors is presented in Table 1. The analysis revealed that a majority of authors agreed that good company management, skilled workers, maintaining high quality of product, market specialization and good financial backing are deemed as important growth factors to the company. From Table 1, it can also be seen that most of the authors list joint venture, good cash flow management and innovation to be considered as firm growth factors as well.

RESEARCH FRAMEWORK

The main variable of interest to this study is the dependent variable of growth performance which is measured by the annual turnover and the number of permanent employees. The independent variables that may influence the dependent variable are the factors that contribute to the firm growth. The relationship between the dependent and independent variables is shown in Figure 1.

METHODOLOGY

For the purpose of data collection, a questionnaire survey was conducted among the large sized construction companies registered as grade G7 contractors under CIDB classification. This

Table 1. Variable of growth factors used by several authors.

Growth factors*	Authors								
	Porter (1980)	Abu Bakar (1993)	Ofori and Chan (2000)	Ligthelm (2004)	Marmet (2004)	Wjewardena and De Zoysa (2005)	CIDB (2006)	Heffernal (2007)	Phaladi and Thwala (2008)
1	Х	Х	х		Х				
2		Х		Χ		X	Х	X	X
3	X	Х		X		X	Х	X	X
4	X	Х	X						
5	X	Х		X	Х	X	Х		X
6	X	Х	X		Х	X	Х	X	
7						X			
8		Х					Х		X
9		Х		X	Х	X		X	X
10	X	Х				X			
11	X	Х				X			X
12		Х							
13				X	Х		Х		
14					Х				
15		Х							X
16		Х	X		Х		Х		
17					Х			X	
18			X				X		X
19			X				X		
20						X		X	
21						X			
22						X			
23			X				X	Χ	
24						X			
25						X			
26						X			
27						Χ			

*Note: 1) Joint venture; 2) Market specialization; 3) Good company management; 4) Diversify expertise; 5) Skilled workers; 6) Maintaining high quality of products;7) Use of new technology and automation 8) technical expertise; 9) Availability of capital; 10) Internal efficiency; 11) Good cash flow management; 12) Effective organization structure; 13) Sufficient knowledge and experience; 14) Good team members; 15) Good site management; 16) Innovation; 17) Research and development; 18) Upgrading and educating members; 19) Safety and security; 20) Commitment to customers' satisfaction; 21) Good relations with customers; 22) Competitive prices of products/services 23) Technological edge; 24) Availability of bank loans and other credit; 25) Open economic policy of the government; 26) Political stability and peaceful environment; 27) Government assistance/tax incentives.

questionnaire was divided into four main sections that covered respondents' background, firm's background, firm's performance and firm's growth factors. Questionnaires were sent to 600 randomly selected respondents via postal service and by hand out of a total population of 3,000 G7 contractors. From 600 questionnaires disseminated, 102 (17% response rate) of the questionnaires were returned, completed and useable. Data was analyzed by using relevance statistical methods such as frequency and regression analysis to establish findings. Besides this, the collected data was also analyzed using the relative importance index (RII) of the various factors that contribute to firm growth factors (Tam et al., 2000). As previously mentioned, the dependent variable in this study is firm growth. Firm growth can be measured by several attributes such as turnover/sales, employment, assets, market shares, and profits. However, in the context of this study, growth in employment and turnover is used as an indicator of firm growth. In order to carry out regression analysis, the dependent variable was split into high growth (increase more than 50%), low growth (increase below than 50%), unchanged and declining.

ANALYSIS

Respondent's background

The respondent's position in the firm is important in acquiring the desired feedback.

From the analysis, the job designations of respondents were mainly managing directors representing 27.2%. Engineer/quantity surveyors contributed the second

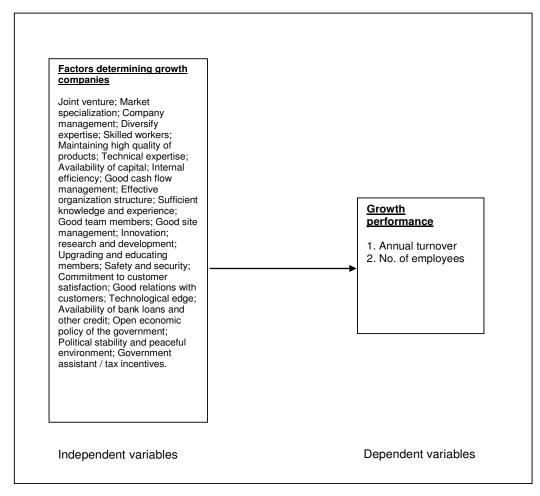


Figure 1. Research model of firm growth.

highest percentage of 25.5%.

Other positions of the respondents were project managers (15.7%), general managers (10.8%) and others, contributing to 6.9%. In terms of status of the firm of the respondents, 80.4% were from private limited companies, 16.7% came from partnership companies and only 2% were from cooperation/consortium based companies. In terms of value of the respondents' firm's annual work, 26.5% of the respondents were involved in projects worth between RM11 to RM20 million, 24.5% of the respondents dealt with projects worth more than RM41 million, 16.7% of the respondents from projects worth between RM 5 million to RM 10 million and 15.7% of the respondents were handling projects worth between RM 31 million to RM 40 million. In terms of firms' age, 52.4% of the respondents were from firms that were set up more than 10 years ago.

Firms founded between 5 to 10 years constituted 38.1%, followed by 7.1% for firms established between 3 to 5 years. Firms that began operations for less than 3 years contributed to only 2.4%. This clearly shows that

most of the firms involved in this study are well experienced in construction works.

Frequency distribution on employment and turnover growth from the start off to current operation

Table 2 shows the frequency distribution on employment and turnover growth level from the start off to current operation. From the Table 2, it can be seen that 55% of the respondents can be considered as having undergone high growth in terms of growth in employment. In terms of turnover growth, 48% of the respondents can be considered as having high growth. The analysis shows that most of the respondents have a high growth in both variables.

Ranking of firm growth factors

Table 3 shows the firm growth factors and their overall

Table 2. Frequency distribution on employment and turnover growth from the start off to current operation.

Crowth lovele	Number of firm (%)			
Growth levels	Number of employees	Turn over		
High growth (> 50%)	55	48		
Low growth (<50%)	4	29.5		
Unchanged (0%)	41	22.5		
Total	100	100		

Table 3. Ranking of firm growth factors.

Firm growth factors	∑w	RII	Rank
Good management of company	479	0.9392	1
Good cash flow management	459	0.9000	2
Sufficient knowledge and experience	456	0.8941	3
Good team members	453	0.8882	4
Technical expertise	452	0.8862	5
Good site management	449	0.8803	6
Commitment to customer satisfaction	447	0.8764	7
Availability of capital	446	0.8745	8
Availability of skilled workers	444	0.8705	9
Good relations with clients	441	0.8647	10
Internal efficiency	439	0.8607	11
Maintaining high quality of products	439	0.8607	12
Availability of bank loans and other credit	432	0.8471	13
Political stability and peaceful environment	431	0.8450	14
Effective organization structure	430	0.8431	15
Competitive prices of products/services	428	0.8392	16
Market specialization	418	0.8196	17
Open economic policy of government	416	0.8156	18
Government assistance/tax incentives	406	0.7960	19
Technological edge	403	0.7901	20
Upgrading and educating members	396	0.7764	21
Use of new technology and automation	394	0.7725	22
Focus on job safety and security	389	0.7627	23
Active in innovation	382	0.7490	24
Active in research and development	374	0.7333	25
Diversify expertise	370	0.7254	26
Forming joint venture	349	0.6843	27

ranking. By using relative important index (RII), firm growth factors could be ranked accordingly. In terms of importance, good management of company is ranked 1. Good cash flow management is the second most important factor that contributes to firms' growth, followed by sufficient knowledge and experience, good team members, technical expertise, good site management, commitment to customer satisfaction and so on as shown in Table 3.

The last five factors including focus on job safety and

security, active in innovation, active in research and development, diversify expertise and forming joint venture are considered and perceived to be the least important factors that influence firm growth.

Multiple regression of employment on the full set of independent variables (Firm growth factors)

The result of multiple regression analysis, which

Table 4. Multiple regression of employment growth on the full set of independent variables (Firm growth factors).

	Employment growth R ² =0.531, Adjusted R ² =0.35and F=2.938**				
Firm growth factors					
-	Standardized coefficients	t	Sig.		
Constant		-0.595	0.554		
Sufficient knowledge and experience	0.111	0.794	0.430		
Market specialization	-0.209	-1.381	0.172		
Diversify expertise	-0.347	-1.863	0.067		
Availability of skilled Workers	-0.178	-1.325	0.189		
Technical expertise	-0.053	-0.247	0.805		
Good team member	0.167	0.785	0.435		
Forming joint venture	-0.449	-3.104	0.003**		
Good management of company	0.172	1.185	0.240		
Internal efficiency	0.020	0.089	0.930		
Good cash flow management	-0.013	-0.096	0.924		
Effective organization structure	0.511	2.444	0.017*		
Good site management	-0.181	-1.239	0.219		
Focus on job safety and security	-0.157	-1.070	0.288		
Upgrading and educating members	-0.087	-0.500	0.619		
Active in innovation	-0.027	-0.113	0.911		
Active in research and development	0.262	1.093	0.278		
Availability of capital	-0.042	-0.268	0.790		
Availability of bank loans and other credit	-0.275	-1.447	0.152		
Technological edge	-0.102	-0.535	0.594		
Use of new technology and automation	0.645	3.071	0.003**		
Maintaining high quality of product	-0.459	-2.181	0.033*		
Commitment to customer satisfaction	0.493	2.736	0.008**		
Competitive price of products/services	-0.088	-0.629	0.532		
Good relationships with clients	-0.066	-0.323	0.748		
Open economic policy of government	0.003	0.013	0.989		
Government assistance/tax incentives	0.095	0.669	0.505		
Political stability and peaceful environment	0.260	1.518	0.133		

Dependent variable: Employment growth; *Significant level at p<0.05, **Significant level at p<0.01.

regressed the firm growth factors against employment growth, is shown in Table 4.

The entire method was used to run this analysis. As it can be seen, the 27 variables together significantly explained 53.1% of the variance in employment growth (F = 2.938, p<0.01, $R^2 = 0.531$).

According to Table 4, only three variables including effective organization structure, use of new technology and automation and commitment to customer satisfaction had significant positive regression weight.

Among these factors, uses of new technology and automation is the most significant predictor, with a *t*-value equal to 3.071 and *p*-value equal to 0.003, indicating that the more uses of new technology and automation demonstrate higher employment growth when compared with firms that do not use new technology and automation.

From Table 4, it can also be seen that there are two predictors that have a significant negative weight, namely, forming joint venture and maintaining high quality of product.

Multiple regression of turnover growth on the full set of independent variables (Firm growth factors)

Table 5 summarizes the multiple regression results of the dependent variable (turnover growth) and progress with firm growth factors. The enter method was used to run this analysis. As it can be seen, the 27 variables together significantly explained 55.7% of the variance in turnover growth (F = 3.262, p < 0.01, $R^2 = 0.557$). The results show that only a few of the firm growth factors have a significant influence on turnover growth, where factors

Table 5. Multiple regression of turnover growth on the full set of independent variables (firm growth factors).

	Turnover growth $R^2 = 0.557$, Adjusted $R^2 = 0.386$ and $F = 3.262**$				
Firm growth factors					
•	Standardized coefficients	t	Sig.		
Constant		-2.572	0.012		
Sufficient knowledge and experience	0.089	0.655	0.515		
Market specialization	0.533	3.631	0.001**		
Diversify expertise	-0.471	-2.599	0.011*		
Availability of skilled workers	-0.204	-1.558	0.124		
Technical expertise	0.389	1.882	0.064		
Good team member	-0.010	048	0.962		
Forming joint venture	-0.415	-2.947	0.004**		
Good management of company	0.460	3.259	0.002**		
Internal efficiency	-0.235	-1.081	0.283		
Good cash flow management	0.075	0.557	0.579		
Effective organization structure	-0.066	-0.324	0.747		
Good site management	-0.100	-0.701	0.486		
Focus on job safety and security	-0.019	-0.135	0.893		
Upgrading and educating members	0.254	1.495	0.139		
Active in innovation	-0.617	-2.658	0.010**		
Active in research and development	0.428	1.840	0.070		
Availability of capital	-0.265	-1.723	0.089		
Availability of bank loans and other credit	0.788	4.261	0.000**		
Technological edge	-0.603	-3.266	0.002**		
Use of New technology and automation	0.533	2.613	0.011**		
Maintaining high quality of product	0.066	0.321	0.749		
Commitment to customer satisfaction	0.274	1.566	0.122		
Competitive price of products/services	0.105	0.774	0.441		
Good relationships with clients	0.099	0.499	0.620		
Open economic policy of government	-0.193	-1.059	0.293		
Government assistance/tax incentives	-0.059	-0.429	0.669		
Political stability and peaceful environment	-0.624	-3.754	0.000**		

Dependent variable: Turnover growth, *Significant level at p<0.05, **Significant level at p<0.01.

concerning market specialization, good management of company, availability of bank loans and other credit and use of new technology and automation were positive significant predictors of turnover growth. The most significant impact on turnover growth is availability of bank loans and other credit facilities, with a *t*-value equal to 4.261 and *p*-value equal to 0.000, indicating that more availability of bank loans and other credit facilities demonstrate higher turnover growth when compared with inadequate bank loans and other credit. From Table 5, it can also be seen that there are five predictors which had a significant negative weight, namely, diversify expertise, forming joint venture, technological edge and political stability and peaceful environment.

DISCUSSION

There are several findings that have been found through this study. From the analysis, good management of a company was found to be the utmost important factor that contributes to the growth of construction companies. These factors are management related and it is in line with previous studies (Hillebrant,1990; Abu Bakar,1993; Yusuf,1995) which found that good management of companies were ranked as the main factors that contribute to the growth of companies.

The top ten most important factors contributing to growth of construction companies are as follows: Good company management; good cash flow management; sufficient knowledge and experience; good team members; technical expertise; good site management; commitment to customer satisfaction; availability of capital; availability of skilled workers; and good relations with clients. These factors should be aptly given more attention by construction companies that aim to achieve growth in their firms.

As been mentioned before, firm growth can be measured by several of indicators such as profit, sales, market coverage, employment and many more other

factors. However, this study used two indicators, namely, number of permanent employees and annual turnover as the basis for growth measurement. From the analysis, effective organization structure, use of new technology and automation and commitment to customer satisfaction had a great correlation with employment growth. The factor concerning use of new technology and automation was considered to be the highest significant factor that influences employment growth. When turnover growth is looked at, it was found that market specialization, good management of company, availability of bank loans and other credit and use of new technology and automation are significant factors towards turnover growth. The highest significant factor for turnover growth is the availability of bank loans and other credit facilities. From these findings, it can be concluded that factor regarding the use of new technology and automation, and, availability of bank loans and other credit are the most significant factors that determine growth of construction companies.

In terms of availability of bank loans and other credit, this finding is in line with previous studies (Storey, 1994; Haibo and Gerrit, 2009) where they had found that availability of financial resource is the most significant factor influencing the growth of firms. Availability of bank loans and other credit is crucial for the growth of a firm because it provides the organization with the required financial slack facilitates the necessary response to changing conditions and increases the willingness of the and innovate change (Zahra, Castrogiovianni, 1996). The study also found that forming joint ventures was considered as an unimportant factor for both aspects of employment growth as well as turnover growth. Although, forming joint ventures was found to have a negative significance with a firm's growth, it does not mean that joint venture endeavors should be ignored because currently construction joint ventures are becoming increasingly popular in order to achieve the objectives of the construction companies. Based on these findings and from the literature review, it can be stated that the objectives of this study have been successfully achieved.

The first objective, which was to establish factors determining growth of construction companies in Malaysia, had been discussed and resolved in the literature review section; where as the second objective of finding out which factors play an important role in determining growth, had been explained and adduced through the findings.

CONCLUSION AND RECOMMENDATIONS

Firm growth is an important indicator of a thriving economy. This study was conducted to identify factors in determining the growth of construction companies. Good management of a company was found to be the utmost

important factor that contributes to the growth of construction companies. This study had also successfully found the significant factors that influence growth of construction companies, whether in terms of employment growth or turnover growth. These factors can act as a basic guideline for construction companies in Malaysia that have the aim to further develop and grow. Construction companies that achieve growth will subsequently go on to contribute more actively towards the development of Malaysia's economy and social elements. According to Autio (2007), growing firms have long attracted the attention of policy makers worldwide and high growth enterprises are seen as important contributors to employment, innovation, and competitiveness. However, it is not suggested that a firm will automatically succeed or grow by addressing all these issues, but rather, it is almost certain that a firm will have a more possible tendency to decline if these factors are ignored. This result provides important implications for the construction companies. Companies with growth ambitions should not only rely on a competitive strategy; they should also rationally evaluate the overall capabilities of the firm.

The results of this study can be utilized as a basis for the top management of a firm to make a strategic choice in enabling the company to grow. Right and appropriate decisions are crucial for construction companies to remain active and grow in today's challenging business environment. The limitation of the study is its relatively small sample size as the main focus was on large sized construction companies under the G7 category. In order to further test these conclusions, the scope of the study would need to be widened to other categories. In future studies, data from other categories of contractors could be collected and with the larger samples, more conclusive findings would be able to be established. Future research should also concentrate on new areas such as the barriers or challenges to a firm's growth. These areas are important because when companies grow, there are a number of challenges that must be faced and ultimately overcome. By using the findings from this and future studies, construction companies, especially in Malaysia, would be able to progressively grow and emerge as vital players within the industry, either locally, regionally or even at a global scale.

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REFERENCES

Abu Bakar AH (1993). Growth Strategy for Construction Companies in Developing Countries, A Malaysian Experience. CIB W-65

- Symposium 93, Port of Spain, Trinidad.
- Autio, E. (2007) Global Entrepreneurship Monitor: 2007 Global Report on High-Growth Entrepreneurship, http://www.gemconsortium.org/download/1207305613771/GEM%20 High%20Growth%20Report%2007b.pdf.
- Baum JR, Locke EA Smith KG (2001). A Multidimensional Model of Venture Growth. Acad. Manage. J., 44: 292-303.
- Betts M, Ofori G (1992). Strategic Planning for Competitive Advantage. Construct Manage. Econ., 10: 511-32.
- Bonaccorsi A, Giannangeli S (2008). One or More Growth Process? Evidence from New Italian Firms. Small Business Economics.
- Castrogiovianni GJ (1996). Pre-Start-Up Planning and the Survival of New Small Firms. J. Manage., 22(6): 801-823
- Chan APC, Chan APL (2004). Key performance indicators for measuring construction success, Benchmark. Int. J., 11(2): 203-221.
- Churchill CF (1997). Managing Growth: The Organizational Architechture of Microfinance Institutions. ACCI on International. http://www.ebook-search-engine.com/organization-growth-ebook-all.html.
- CIDB (2006), Malaysia Construction Industry Master Plan.
- CIDB (2008). Contractors Registered, http://www.cidb.gov.my/
- Haibo Z, Gerrit DW (2009). Determinants and dimensions of firm growth. In: EIM Business and Policy Research / Scales Research Reports. RePEc:eim:papers:h200903.
- Harty CF, Coodier CI, Soetato R, Austin SA, Dainty ARJ Prince ADF.(2006). The Future of Construction: a Critical Review of Construction Future Studies. Construct. Manage. Econ., 25: 477-493.
- Heffernal P (2007). Constraint on the Growth of Technology-Based Firm- Perception and Effects (paperback), United Kingdom: University of Cambridge, Institute for Manufacturing.
- Hillebrandt PM, Cannon J (1990). The Modern Construction Firm. Macmillan, Basingstoke.
- Hisatomi Y (1990). An Introduction to Japanese Construction Industry and General Contractors, CIB 90. 5: 247-255.
- http://www.cidb.gov.my/cidbweb/bin/corporate/cimp/CIMP_Fwd.pdf
- Ligthelm AA (2004). Factors Responsible for the Growth of Small Business Firms: Empirical Evidence. 13th Nordic Conference on Small Business Research.
- Marmet D (2004). Growth of New Firms: Which Factors influence Post-Entry Performance? An Empirical Analysis Based on Swiss Firm Data, KOF Working Paper, No.97, Swiss Federal Institute of Technology: Zurich.
- Morrison L, Breen J, Shameen A (2003) Small Business Growth: Intention, Ability and Opportunity. J. Small Bus. Manage., 41(4): 417-425
- Ofori G, Chan SL (2000). Growth Paths of Construction Enterprises in Singapore, 1980-98. Eng. Construct. Architect. Manage., 7(3): 307-321
- Penrose E (1959). The Theory of the Growth of the Firm, Oxford University Press.
- Pettus ML (2003). Growth From Chaos: Developing Your Firm' Resources to Achieve Profitability without Cost Cutting, London: Praeger Publishers.

- Phaladi MJ, Thwala WD (2008). Critical Success Factors for Small and Medium Sized Contractors in North West Province, South Africa, 5th Post Graduate Conference on Construction Industry Development, 16-18 March, Bloemfontein, South Africa.
- Porter ME (1980) Competitive Strategy Techniques for Analyzing Industries and Competitors. The free press.
- Recklies O (2001). Managing Growth Barriers and Preconditions, Recklies Management Project GmbH, http://themanager.org/pdf/ManagingGrowthII.PDF.
- Rossi GB, Salieri P, Sartori S (2002). Measurement growth in a total quality perspective. J. Measure., 32: 117-123.
- Schneider J, Dowling M, Raghuram S (2007). Empowerment As a Succes Factor in Start-up. RMS., 1: 167-184.
- Skrt B, Antoncic B (2004). Strategic Planning and Small Firm Growth: An Empirical Examination. Manag. Global Transit., 2(2): 107-122.
- Stam E, Garnsey E, Heffernan P (2006). A Penrosean Theory of the Firm: Implication and Application for the Study of the Growth of Young Firms, Chapter 8 in M. Dietrich (ed.), Economics of the Firm: Analysis, Evolution and History.
- Storey DJ (1994). Understanding the small Business sector. London: Routledge, 8(2): 93-106.
- Tam CM, Deng ZM, Zeng SX, Ho CS (2000). Quest for continuous quality improvement for public housing construction in Hong Kong. Construct. Manage. Econ., 18(4): 437-446.
- Volpe L, Biferali D (2008). Edith Tilton Penrose, the Theory of the Growth of the Firm. J. Manage. Govern., 12: 119-125.
- Weinzimmer LG (2000). A Replication and Extension of Organizational Growth Determinants. J. Bus. Res., 48: 35-41.
- Wijewardena H, De Zoysa A (2005). A Factor Analytic Study of the Determinants of Success in Manufacturing SMEs, 35th EISB Conference Sustaining the Entrepreneurial Spirit over Time, Barcelona, Spain, 12-14 September, 2005. pp. 1-11.
- Yusuf, Attahir (1995). "Critical Success Factors for Small Business: Perceptions of South Pacific Entrepreneurs." J. Small Bus. Manage., 33(1): 68-73.
- Zahra S (1991). Predictors and Financial Outcomes of Corporate Entrepreneurship: an explorative study, J. Bus. Vent., 6: 259-285.