

# Determinants of Competitive Advantage: A Case of Malaysian Bumiputera Contractors

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**Abstract:** In this paper, the authors attempt to discuss the competitive advantage among the contractors in Malaysia through the relationship between the variables; human resource management, finance, government assistance, suppliers, technology, and new market entrance with competitive advantage (product differentiation, cost leadership, and focus strategy). The paper further explored the profile of the contractors in the State of Terengganu, as well as examining the ability of each class of contractors in maintaining the competitive advantage. From the total population list, 349 samples were taken for the analysis. The population of the study was taken based on the sampling frame generated by Contractor Services Centre (PKK). The researchers used stratified sampling as a sampling technique in order to get the most efficient representation of the population. The questionnaire was personally distributed to the contractors with the assistance of enumerators. The instrument consists of five (5) sections measured by using Likert Scale. Based on the findings, it demonstrated that only five (5) out of six (6) independent variables (human resource management, finance, technology, suppliers, and new market entrance) had a significant relationship with competitive advantage. Moreover, the five (5) independent variables were able to explain 72.2% of the variance in the competitive advantage among contractors in Terengganu.

## 1 INTRODUCTION

Maintaining competitive advantage is always a concern for any contractors if they wish to survive. The construction industry is changing constantly with the developments of new business methods and technologies. Thus, construction companies have to adopt various applications and develop appropriate strategies to be more competitive in this industry and to become successful in their business. Competitive pressures, both in domestic and global markets, shifted the desired outcomes in management of the relationship away from compliance of employees' behavior towards a more positive commitment on customers and business requirements. People are individuals who bring their own perspectives, values and attributes to organizational life, and when managed effectively, these human traits can bring considerable benefits to organizations. Construction organizations have a tendency to use labor as part of

a survival strategy, retaining and retraining the more skilled employees or those skilled employees could less easily be replaced (Puni et.al, 2016).

The construction industry is considered as a labor-intensive industry. In general, the concept of labor intensity is relative between industries. There are complexities interfaces of different personnel within construction industry whether in-house or within an organization, or even inter-organization. Construction profession offers opportunity to create works for the benefit of humankind, but in turn, those who work in the profession accept substantial responsibilities. Construction industries serve as industries that contribute to the growth of country's economy and promote continuous improvement to environment by enhancing better lifestyle. In general, there are four (4) types of construction; residential, commercial/institutional building, industrial, and heavy/high-way segments. Most contracts are awarded to a general contractor who awards

subcontracts to specialty contractors as a common practice in a traditional design-bid-build procurement system method. Within the construction industry, various organization groups put together their efforts in forming teams to run the project by performing intellectual effort in devoting individual capability to complete the project within project delivery criteria. Clifford and Richard (2004) have stated that, as for the traditional design-bid-build procurement system, the project players may involve the professionals in the industry such as Owners/Clients, Constructors Groups (including main Contractor, Subcontractors, Suppliers and etc.), Consultants Groups (including Architects, Civil and Structural Engineers, Quantity Surveyors, Land Surveyors, and etc.).

The scenarios of contractors in the state of Terengganu demonstrated that they are in the state of anxiety due to the lack of development projects in Terengganu. As such, the probability of the contractors to get tenders or projects will be much lower. Furthermore, the increasing number of contractors and the imbalance of development projects in the state further added fierce competition to the industry. Although there were government actions to freeze the contractor license for some classes, but still the number of registered contractors outnumbered the total existing project in the state. In terms of business performance, the above development will generate significant impact, whereby due to intense competition among the contractors, it leads to consideration of 'popular' pricing at the minimum profit. Although, the provision of the price tag for the project is much higher but still they go for a lower price in order to secure the project. In view of this scenario, the tenders will take into consideration the 'popular one' than the price that should be as planned. As such, due to low profit margin, any occurrences of late payments will further weaken the ability of the contractors. Consequently, this made it difficult for contractors to be in a comfortable position.

The competition within the industry rose not only among the registered contractors but among it also involved contractors that are not registered with Contractor Services Centre (PKK). This would threaten and affect the career and sources of income of the contractors. Of the total population, only 10% of the successful contractors were those that have contacts, high capital capacity, and efficient management. Meanwhile, 40% of the contractors could only survive and maintain the business as well as be able to meet the current needs, while 50% of them were not capable of sustaining their ability to remain competitive in the

## 2 LITERATURE REVIEW

### 2.1 Competitive Advantage

Competitiveness is a multi-dimensional concept, which has many definitions at different levels of analysis. Among the common measures of competitiveness includes market share, profitability, growth rate, and the ability to supply low-cost/high quality products or services at the firm level (Man et al., 2002). Armstrong et al. (2004) proposed that competitive advantage is the ability to offer consumer with greater value either by lowering price or providing more benefits than competitors that justify a higher price tag. In the meantime, the company must design broad competitive marketing strategies by which can gain competitive advantage through superior customer value (Kotler & Armstrong, 2012). D'Cruz and Rugman (1992) view competitiveness as the ability of a firm to design, produce and promote or market products superior to those offered by competitors upon considering the price and non-price qualities.

A review of the literature reveals the paradigm shift: rational usage of resources was the common strategy to remain competitive in the 1980s markets, while more emphasis was put in the 1990s and early 2000s on the multi-dimensional and evolutionary nature of competition. The dynamic of the businesses has become more dependent on knowledge investments and learning ability than on physical capital (European Commission, 2000). It is often assumed by most people that only the firms with the ability to transform individual and organizational knowledge resources into strategic skills will achieve competitive advantages and survive (Van Gils & Ve Zwart, 2004).

The purpose of competitive advantages is not to retreat from competition but to compete selectively from an advantageous strategic position. Porter (1985) defined three generic, competitive strategies as overall cost leadership, differentiation and focus. Differentiation is possible only until selection has taken place; thereafter, competition is on the price alone. For a contracting firm to be differentiated from its competitors, it can adopt one or more forms of competitive advantage; strategic management in construction, bidding strategy, technological and organizational innovations, technology strategy, strategic planning, and alliances.

Competitive advantage is the essence of success or failure of a company. The competitive spirit provides determination in executing proper activities for the company in developing efforts such as

innovation, cohesive culture and good realization. With competitive strategy, it lays out a way to find competitive positions in an industry and to strengthen and continuously position a company (Porter, 2004). The definition of competitive advantage therefore should be able to satisfy customer needs, as a key characteristic of a product and service, be able to satisfy the worker needs and have the potential to grow up (Momaya & Selby, 1998).

## 2.2 Human Resource Management

Human Resource Management (HRM) includes all activities related to the management of employment relationships in the firm (Lin et al., 2008). Having the ability to develop HRM practices aligned with business strategy could be a source of sustainable competitive advantages (Andonova & Zuleta, 2007). Thus, with strategic HRM practices, it provides firms with the internal capacity to adapt and adjust to their competitive environment by aligning HRM policies and practices (Kidwell & Fish, 2007).

Entrepreneurial orientation is critical for organizational survival and growth in today's business environment. Moreover, the current trend towards knowledge-intensive industries means that competitiveness increasingly depends on the management of the relational bases of members of organizations. HRM theory and practice can contribute to understanding issues faced by the entrepreneurial firm (Altinay et al., 2008). An example of this is human resource acquisition and deployment in startups, highly innovative ventures, and development on the speed and direction of growth in rapidly expanding firms (Barrett & Mayson, 2007).

Transience arises within projects, since the composition of teams normally changes during different project stages, involving people from many organizations, backgrounds and locations. Male employment leads to many challenges such as skills shortages caused by recruiting from only a portion of population, difficulties in the management of equal opportunities and workforce diversity, and considerable challenges in terms of creating an accommodating atmosphere in which individuals' diverse skills and competencies are fully utilized (Bredin, & Söderlund, 2011). Lack of effective training and performance appraisal - the important factor in implementing human resources management in construction is in need of effective training and ways in measuring the performance of their workers training. A system of 'performance measures' is needed in order to monitor improvements among

construction teams. In other words, the participative approach addresses the development of good supervisor-subordinate relationships and cohesive work groups in order to satisfy both social needs and the needs of business demand (Alazzaz & Whyte, 2015). From the discussion above, we propose the following hypothesis:

## 2.3 Financial Capabilities

Dyer et.al, (2017), proposed that financial concepts are considered paramount in acquiring capital, evaluate the worth of a business, buy raw material, expand the business, and renovate the premise. A successful business often requires additional capital. Besides net profit from the operation and the sale of assets, other basic sources of capital could be in a form of loan offered by the financial institutions. Usually, the financial institution has already determined the amount of loan that the entrepreneurs are eligible to apply. However, some entrepreneurs decided not to apply the loan because the interest charged is assumed very high and, thus, reduces the profit margin and burdens the entrepreneurs. Hence, the alternative is: they will use their own saving, or borrow from their family. For the partnering company, the capital comes from the partner(s) of the company.

Price is also one of the most flexible elements of the marketing mix; it changes quickly, unlike product features and subcontractor/supplier commitments. The number one problem encountered by most marketing executives in the industry is price competition. There are at least four common mistakes made by marketing executives (Kotler, 2012). First, pricing is too cost oriented. Second, once an offer is made, price is not revised to capitalize on market conditions or to fend off competitive pressures. Third, price is not set as an intrinsic element of a market-positioning strategy, and fourth, price is not adjusted enough for different clients, project types, and amount of work at hand, equipment ownership. With that, it leads to the next hypothesis:

## 2.4 Technology

Technology is the knowledge of how to do or make something which yields benefits to users. Every business activity involves technology. While this may seem fundamental, every firm is constrained by what it knows how to do it. The possession of technology is the price of entry in all businesses and its development is important to the maintenance of competitive position in most, for some, it is the key to

competitive advantage (Gibb & Blili, 2017). New technologies have made dizzying changes in the way we live and work. Technology includes equipment, manufacturing processes, and innovative materials used in many products. Because of new discoveries and inventories, better quality goods and services are built at a faster pace and often at a lower cost (Everard & Burrow, 2004), and thus, contributed to the improvement of manufacturing for many years. Computers have dramatically improved the quality and speed of the production and have reduced costs. There are many types of technology that has the potential to contribute are able to contribute several strategic processes to which technology has the potential to contribute. Examples of improving customer services, improving time to market, improving management communication, improving quality and increasing global reach (Nobre, 2016).

IT has been proven to be an important key enabler in product design and much likely to be implemented in the construction industry. In manufacturing, a large scale and complex engineering projects as the development of the 'Airbus A380' aircraft are only feasible by using simultaneous and concurrent engineering interwoven with suitable 3D-design toolkits (Jaeger, 2007). Similar to an advance and more complex construction technology, for instance, the modular houses and mass-customization can only be developed and produced by using extensive and interwoven IT tools. Eichert and Kazi (2007) pointed out that IT improves tendering, planning, monitoring, distribution, logistic and cost comparison process by establishing collaborative design integration, accurate data and effective dealing with project documents.

Verweij and Voorbij, (2007) identified the role of IT tools which are to establish communication between project team and suppliers as a medium for quality control of overall project deliveries. InPro system, for instance, is one of the IT tools developed to improve design integration. InPro system is an advanced system of integrated design, analysis processes and decision-support developed based on existing IT tools. The tools will radically improve collaboration and integration between design, manufacturing and assembly process (Jaeger, 2007). The importance of technology in construction has led to the next hypothesis:

## 2.5 Government Intervention

Government intervention has been historically important in creating economic growth and in fostering diffusion of technological innovations.

Jessop (2016) highlighted the role of the state as a promoter of economic growth by getting the nation into the 'right businesses', creating competitive advantages, setting standards and creating demand. The role of government has been fundamental in the diffusion of infrastructures such as telecommunication networks. In e-commerce diffusion, many studies address the role of government intervention to avoid digital division of poor and rich countries. Madon (2000) stated that an analysis of the relationship between Internet diffusion and socio-economic development in developing countries identifies three (3) major areas of government intervention: creating knowledge, disseminating knowledge and human resources development. Government intervention is especially important at sustaining technological development in SMEs (Okhrimenko, 2017). Recently, many governments and international organizations have taken initiatives to foster the adoption of electronic commerce in small and medium-sized enterprises (OECD, 1999). These initiatives are considered important to avoid a digital divide between small and large companies. This is a testable hypothesis of this research:

## 2.6 Supplier

The result of involving suppliers in product development seems to be mixed (Hwang & Suh, 2018). For example, involving suppliers in the decision making process does not always lead to acceleration of project cycle time. Some may argue that its involvement may contribute to reduced development time, reduced development and product costs and improved product quality. Some authors conclude that the way supplier involvement is managed in the product development process is important in explaining the success of this supplier involvement (Yoo, Shin & Park, 2015).

However, SMEs themselves are interested in merging with other complementary enterprises in order to achieve a critical dimension necessary to cope with existing challenges (OECD, 2007). Consequently, there is a real pressure on SME subcontractors to grow through either mergers or the development of groups of interconnected enterprises. For instance, approximately half of the French manufacturing subcontractors belong to a group. This figure is highly dependent on the sector in which the subcontractor is active (i.e. higher presence of groups in forging activities but lower in other sectors such as coating of metals) as well as on the size of the enterprise. Such scenarios lead to the next hypothesis:

## 2.7 New Market Entrance

A new venture started by a large company will have certain features of a classical new venture (i.e. venture started from scratch, often without substantial funding and managerial skills). Lofsten (2016) noted in his fundamental work on new ventures, “Many of the practices of what we usually consider well-managed companies tend to inhibit entrepreneurial behavior”. As far as classical new ventures are concerned, the leading role here belongs to entrepreneurship. It is claimed that the success of every new venture depends mostly on the entrepreneurial capabilities of the founder(s). The focus of research is the entrepreneurship itself, business opportunity in the new market and business concept, resource acquisition (finance, human, organization, knowledge), and managing growth of the venture. One of the important issues in managing a new venture is the transition from informal, low-control style of management (characteristic of early phases of new ventures) to formal, high-control management present in well-established companies. Lofsten (2016) distinguishes between the ‘promoter’, who is mainly focused on organizing activities and bringing entrepreneurial ideas into life, and the ‘trustee’, who is mostly concerned with administrating the existing business and safeguarding achieved results. It is critical to reach a reasonable balance between the two managerial modes. Based on review of the literature, the following conceptual framework are created as shown in Figure 1, and the following hypothesis is developed as stated below.

H1: There is a significant relationship between effective human resource management and competitive advantage.

H2: There is a significant relationship between financial capability and competitive advantage.

H3: There is a significant relationship between the adoption of technology and competitive advantage.

H4: There is a significant relationship between government intervention and competitive advantage

H5: There is a significant relationship between suppliers and competitive advantage.

H6: There is a significant relationship between new market entrance and competitive advantage.

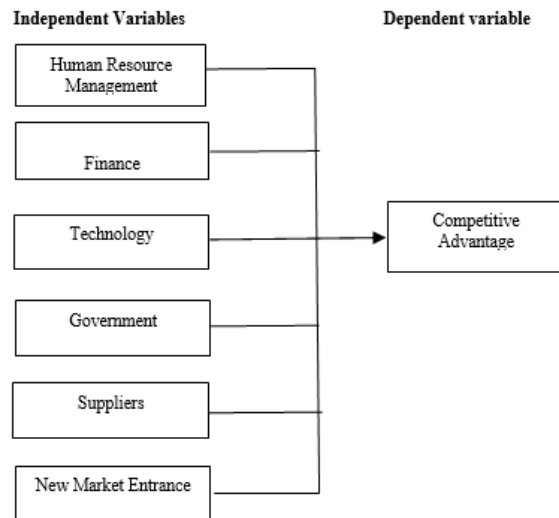


Figure 1: Theoretical Framework

## 3 METHODOLOGY

### 3.1 Research Design and Collection Method

This research applied self-administered questionnaire survey was collected in 2016. The decision on the sample size for the study followed the table generated by Krejcie and Morgan (1970). With the population of 3,331 contractors, 349 contractors were selected as the respondents for the research. The population were determine based on the sampling frame generated by Contractor Services Centre (PKK) for the year 2010. The study adopted stratified sampling technique in order to get the most efficient representation of the population. The researchers decided to divide 349 samples into seven locations. Of the samples were 32 respondents from Marang, 32 respondents from Setiu, 36 respondents from Kemaman, 136 respondents from Kuala Terengganu, 30 respondents from Hulu Terengganu, 32 respondents from Dungun, and 51 respondents from Besut. The technique further divided the samples according to classification of contractors. All respondents' names were placed into a bowl that has already been marked according to the business location and classes. Thus, every sample was given the equal chance to be selected as a respondent for this study.

### 3.2 Survey Instruments

The survey instrument, which is personally administered questionnaire, was distributed to the contractors (respondents) of classes A, B, C, D, E,

and F. The instrument was made up of five sections measured by using Likert Scale whereby the respondents needed to indicate a degree of agreement or disagreement with each series of statements about the stimulus object. The scale items were made up of five responses rating from “1” or “Strongly Disagree” to “5” or “Strongly Agree”. Section A of the questionnaires is for demographic profile of the respondents. This part includes the respondents’ gender, age, origin, race, marital status, education level, level of monthly income, year(s) involved as a contractor, license category, area, business status, and getting project in several years. In section B, the questions are related to investigating how internal factors can influence competitive advantage, which are HRM, Finance, and Technologies. The concept of HRM focuses on recruitment of management and providing direction for the employees in the organization. The financial factor is measured in terms of the credit and banking involving money, time, and risk while technology is measured in terms of the usage and knowledge of tools, techniques, crafts, systems or methods. As in section C, D, and E, the questions aimed at measuring external factors involving Government intervention, Suppliers, and New Market Entrance subsequently. Section F examined the level of competitive advantage among contractors.

License Category	Class A	17	4.9
	Class B	14	4.0
	Class C	25	7.2
	Class D	37	10.6
	Class E	16	4.6
	Class F	240	68.8
Education level	PMR	40	11.5
	SPM	183	52.4
	Diploma	67	19.2
	Degree	55	15.8
	Further degree	4	1.1
Years involved as a contractor	< 1 year	2	0.6
	1-5 years	25	7.2
	6-10 years	38	10.9
	> 10 years	0	81.4
Area	Kemaman	36	10.3
	Kuala Terengganu	136	39.0
	Dungun	32	9.2
	Marang	32	9.2
	Besut	51	4.6
	Hulu Terengganu	30	8.6
	Setiu	32	9.2
Business Status	Sole Proprietorship	226	64.8
	Partnership	43	12.3
	Private Limited Co (Sdn Bhd.)	79	22.6
		1	3

## 4 DATA FINDINGS AND ANALYSIS

### 4.1 Frequency Analysis

A frequency analysis was conducted to determine the demographic profiles of the respondents. The result in Table 1 highlighted the demographic profiles of the contractors.

Table 1: Respondents’ (contractors) profiles

Profile	Description	Responses	Percentage
Gender	Male	327	93.7
	Female	22	6.3
Marital Status	Single	331	94.8
	Married	18	5.2
Age	20-24	1	0.3
	25-29	11	3.2
	30-34	4	1.1
	35-39	52	14.9
	40 and >	281	80.5

Based on the samples of the study, majority of the respondents were male-dominated and they were in the middle age and above the brackets (40 years old and above) indicating that the youth categories were not willing or yet to be ready to meet the challenges in the industry. For those who involved in the industry where most of contractors were in the form of sole proprietorship, the earning of the contract business was not that encouraging compared to the risk involved. In the meantime, the fourth objective attempted to examine the ability of each class of contractors in maintaining the competitive advantage. The result indicated the existence of differences as each class had their own strength to maintain in this industry. Those who were from class F, though made up the majority of the population, were still at the handicapped side while those who were from Classes B and C were found to be more stable in the industry.

### 4.2 Reliability Analysis

A total of 370 sets of questionnaires were distributed to the selected respondents for assessing the reliability of the instrument. The results for the reliability test for the samples collected are as follows: 0.895 for Human Resource Management,

0.797 for Financial Capability, 0.906 for Technologies, 0.855 for Government intervention, 0.904 for Suppliers, 0.638 for New Market Entrance, and 0.938 for Competitive Advantage.

### 4.3 Correlation Analysis

Pearson Correlation test was conducted as a preliminary analysis to investigate the relationship between the independent variables and the dependent variable. Using SPSS version 21, data was then being ran and tabulated. All figures are shown in table 2.

Table 2: Correlation analysis

	COM P	HRM	FIN	TECH	GOV	SUPP
HRM	0.744* *					
Finance (FIN)	0.580* *	0.612 **				
Technology (TECH)	0.764* *	0.658 **	0.498 **			
Government Intervention (GOV)	-0.040	.085	0.163 **	-0.156 **		
Suppliers (SUPP)	-0.485**	-0.312 **	-0.164 **	-0.465 **	0.398 **	
New Market Entrance (NME)	-0.059	0.019	-0.265 **	-0.089	-0.228 **	0.087

\*COMP- Competitive Advantage

\*\*correlation is significant at the 0.01 (2 tailed)

The results of the analysis showed that the relationship between HRM and Technologies with Competitive Advantage indicating a high correlation as shown by 0.744 and 0.764, respectively. The coefficient analysis between Finance with Competitive Advantage showed that it is moderate at correlation value of 0.580. But there was a moderate, negative correlation between Suppliers and Competitive Advantages,  $r=-0.485$ ,  $n=349$ ,  $p<0.05$ , with higher involving suppliers in product development, the less contractor's competitive advantages. However, Government intervention and New Market Entrance were not significant as indicated by the value of -0.040 and -0.059.

### 4.4 Multiple Regression Analysis

Multiple Regression Analysis technique was then used to further examine the relationship between the observed independent variables and the dependent variable. Table 3 provides the result of regression analysis. The result showed that HRM, Finance, Technologies, Government intervention, Suppliers, and New Market Entrance contributed significantly ( $F = 148.396$ ;  $p<0.01$ ) to competitive advantage. The results further showed that there was a significant relationship between HRM ( $\beta= 0.320$ ;  $p<0.01$ ), Finance ( $\beta= 0.156$ ;  $p<0.01$ ), Technology ( $\beta= 0.394$ ;  $p<0.01$ ), Suppliers Involvement ( $\beta=-0.202$ ;  $p<0.01$ ) and Competitive Advantage at 5 % significant level. However, the result showed no

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Table 3: Summary of multiple regression analysis

Dimensions	B	T	P	Collinearity Statistics	
				Tolerance	VIF
H R M	0.320	7.120	0.000	0.402	2.488
Financial Capability	0.156	3.991	0.000	0.530	1.887
Technology	0.394	9.344	0.000	0.456	2.194
Government intervention	0.058	1.697	0.091	0.696	1.438
Suppliers Involvement	-0.202	-5.686	0.000	0.644	1.553
New Market Entrance	0.042	1.321	0.187	0.791	1.265
R	0.850				
R <sup>2</sup>	0.722				
F value	148.396				
Sig.	0.000				

Note: Predictors (constant) HRM, finance, technology, Government, suppliers and new market entrance.  $P \leq 0.05$ .

Table 3 provides a summary of the result of the regression analysis. The result showed that HRM, Finance, Technologies, Government intervention, Suppliers, and New Market Entrance contributed significantly ( $F = 148.396$ ;  $p<0.01$ ) to competitive advantage. The results further showed that there was a significant relationship between HRM ( $\beta= 0.320$ ;  $p<0.01$ ), Finance ( $\beta= 0.156$ ;  $p<0.01$ ), Technology ( $\beta= 0.394$ ;  $p<0.01$ ), Suppliers Involvement ( $\beta=-0.202$ ;  $p<0.01$ ) and Competitive Advantage at 5 % significant level. However, the result showed no

significant relationship between Government intervention ( $\beta = 0.058$ ;  $p > 0.05$ ) and Competitive Advantage and New Market Entrance ( $\beta = 0.042$ ;  $p > 0.05$ ) and Competitive Advantage. Of all the six dimensions, technology possesses the strongest value, followed by HRM, Finance, and Suppliers. There was no statistical support for H<sub>5</sub> and H<sub>7</sub>. There was significant evidence to support for H<sub>2</sub>, H<sub>3</sub>, H<sub>4</sub>, and H<sub>6</sub>. However, H<sub>6</sub> shows the negative significant relationship with competitive advantage such as the supplier's involvement becomes higher, the level of competitive advantage becomes lower. All the above variables were able to explain 72.2% of the variations in competitive advantage.

## 5 CONCLUSION AND RECOMMENDATION

In general, the entire proposed objectives have been addressed. The first objective was to investigate the relationship between independent variables and competitive advantage of the contractors in Terengganu. The result showed that the most significant factor that has the relationship with competitive advantage of the contractors was technology. This was similar to the early theory mentioned as well as some earlier findings supported the notion that, with the technology application, it will eventually improve quality, speed of production, and cost reduction (Awward & Akroush, 2016, Everard & Burrow, 2004).

Four out of six independent variables showed significant relationship with the contractor's competitive advantage. However, there was moderately negative relationship between suppliers and competitive advantage. In some cases, the suppliers and contractors were competing with each other. Thus, not all suppliers were willing to collaborate with the contractors. In addressing the relationship between government intervention and new market entrance on contractors competitive advantage, both variables failed to help contractors to build their competitive advantage. Government intervention and new market entrance were the external factors that were beyond the control of contractors who were responsible for an activity but those had an effect on the success or failure of the activity. In summary, the role of government is still crucial. Government agencies are responsible to create a conducive environment in terms of regulations, institutional structures, and policy initiatives in micro- and macro-economic levels to

enable corporations to make economic decisions that can facilitate and enhance their productivity, provision of quality human resources, and provide the physical and communication infrastructures. All the above achievements provided a road map for continuously gaining competitive advantage in the industry. Having a more transparent "contract award" to the contractors will definitely make the industry healthier.

In order to improve their level of competitive advantage, contractors should focus on improving the management of their human resources which include planning, organizing, staffing, leading and controlling. Moreover, factors that are frequently considered as a part of the internal environment including organization mission statement, leadership styles, and its organizational culture should also be considered. To maintain as contractors, they need financial strength to roll their capital if they face late compensation. The contractors must also consider the differentiation of their products in terms of price and quality compared to its competitors and developing sound business strategies. These effort can be achieved by appropriate configuration in terms of inbound and outbound logistics, marketing and sales, and high level of co-ordination. Moreover these efforts may contribute to stronger competitive advantages particularly for corporations involved in international business and industries.

Based on the findings, 72.2% of changes in the six independent variables were able to explain their relationship with competitive advantage among contractors. Furthermore, 27.8% of the variance was unexplained. This variance could be attributed by other elements such as political actor, timeliness, and service quality. For further research, these variables can be added to obtain more information in explaining the competitive advantage. Political actors can be either individuals or temporal or functional coalitions of actors with common interests. Accordingly, the literature on political NPD project selection distinguishes between actors with product championing or similar roles (Singh et al., 2008). In the definition of a product champion, implicit acknowledgement of organizational politics can be found in championing literature since championing roles are suggested to be related to hierarchy, autonomy, persuasion or cross-functional ties. Similarly, Rosenau and Grithens (2005) highlighted that time is the most important measure of project performance success. This idea is supported by Xiao and Proverbs (2006) who claimed that project delays have a significant implication on cost and quality. Mpfou et.al (2017) conducted a literature survey on



causes of a project delay where they claimed that 50 percent of the delays could be categorized as non-excusable delays why the contractors were responsible.

The fact that management commitment to service quality critically affects the excellence of the services delivered and the neglect in this area may lead to service failure. In order to assess objectively the initiatives relating to management commitment to service quality, Forrester (2000) has suggested that employee evaluations of management initiatives are an appropriate tool to use. According to Lytle and Timmerman (2006), when the management is committed to improve service quality, employees will be provided with more opportunity for training. Such training may enhance the skills of employees in dealing with unexpected work problems and their competence in making appropriate suggestions for decision-making.

## REFERENCES

- Alazzaz, F., & Whyte, A. (2015). Linking Employee Empowerment With Productivity In Off-Site Construction. *Engineering, Construction and Architectural Management*, 22(1), 21-37
- Altinay, L., Altinay, E., Gannon, J. (2008), "Exploring the relationship between the human resource management practices and growth in small service firms", *The Service Industries Journal*, Vol. 28 No.7, pp.919-37.
- Andonova, V., Zuleta, H. (2007), "The effect of enforcement on human resources practices", *International Journal of Manpower*, Vol. 28 No.5, pp.344-53.
- Awwad, A., & Akroush, D. M. N. (2016). New Product Development Performance Success Measures: An Exploratory Research. *EuroMed Journal of Business*, 11(1), 2-29.
- Barrett, R., Mayson, S. (2007), "Human Resource Management In Growing Small Firms", *Journal of Small Business and Enterprise Development*, Vol. 14 No.2, pp.307-20.
- Bredin, K., & Söderlund, J. (2011). The HR Quadriad: A Framework For The Analysis Of HRM In Project-Based Organizations. *The International Journal of Human Resource Management*, 22(10), 2202-2221.
- Clifford. J. S., and Richard S. M., (2004), *Construction Management Fundamentals*, McGraw Hill, New Yoon.
- Dainty, A.R.J., Bagilhole, B.M. and Neale, R.H., (2000) 'The Compatibility of Construction Companies' Human Resource Development Policies with Employee Career Expectations,' *Engineering, Construction & Architectural Management* 7 (2): 169-78.
- Dyer, J. H., Godfrey, P., Jensen, R., & Bryce, D. (2017). *Strategic Management: Concepts And Cases*. Wiley Global Education.
- Eichert, J., Kazi, A. S. (2007) *Vision and Strategy of Manubuild- Open Building Manufacturing* (edited by) Kazi, A. S., Hannus, M., Boudjabeur, S., Malone, A. (2007), *Open Building Manufacturing – Core Concept and Industrial Requirement*, Manubuild Consortium and VTT Finland Publication, Finland
- European Commission (2000), *Innovation Policy in a Knowledge-Based Economy. A Merit Study Commissioned by the European Commission*, EUR 17023. Enterprise Directorate General.
- Everard, K. E. and Burrow, J. L. (2004). *Business principles and management 11E anniversary edition*. United States of America: Thomson South-Western.
- Forrester, R. (2000), "Empowerment: rejuvenating a potent idea", *Academy of Management Executive*, Vol. 14 No.3, pp.67-80.
- Gibb, Y. K., & Blili, S. (2017). Small Business and Intellectual Asset Governance: An Integrated Analytical Framework. *GSTF Journal on Business Review (GBR)*, 2(2).
- Hwang, S., & Suh, E. K. (2018). A Study on Supplier Involvement and Buyer Strategic Decisions. *The International Journal of Industrial Distribution & Business*, 9(4), 53-62.
- Jaeger, J., (2007) *InPro- Integrated project within the 6th Framework Program*, The Proceedings Of 1st Manubuild Conference, April 2007, Rotterdam
- Jessop, B. (2016). The Developmental State in an Era of Finance-Dominated Accumulation. In *The Asian Developmental State* (pp. 27-55). Palgrave Macmillan, New York.
- Kidwell, R.E., and Fish, A.J. (2007), "High Performance Human Resource Practices in Australian Family Business: Preliminary Evidence Form the Wine Industry", *International Entrepreneurship and Management Journal*, 3 (1), pp.1-14.
- Kotler, P. (2012). *Marketing Management Analysis, Planning, Implementation, and Control*, 9th edition, Prentice Hall, New Jersey.
- Kotler, P., and Armstrong, G., (2012). *Principle of Marketing*, 14<sup>th</sup> Edition, Pearson Education Limited, England.
- Krejcie, R. & Morgan, D. (1970). Determining Sample Size for Research Activities, *Educational and Psychological Measurement*, 30 (3), 607-610.
- Lin, C.H., Peng, C.H., Kao, D. (2008), "The Innovativeness Effect of Market Orientation and Learning Orientation on Business Performance", *International Journal of Manpower*, Vol. 29 No.8, pp.752-72.
- Löfsten, H. (2016). New Technology-Based Firms and Their Survival: The Importance of Business Networks, and Entrepreneurial Business Behavior and Competition. *Local Economy*, 31(3), 393-409.
- Lytle, R.S., Timmerman, J.E. (2006), "Service Orientation and Performance: An Organizational Perspective", *Journal of Services Marketing*, Vol. 20 No.2, pp.136-47.
- Madon, S. (2000), 'The Internet and Socio-Economic Development: Exploring the Interaction', *Information Technology and People*, Vol. 13, No. 2, pp.85-101.

- Okhrimenko, O. (2017). The Mechanisms of Integration in Conditions of Asymmetry of Innovative Development of the EU. *CES Working Papers*, 9(3), 293-312.
- Malhotra, N.K. and Peterson, M. (2001), "Marketing Research In The New Millennium: Emerging Issues And Trends", *Marketing Intelligence and Planning*, Vol. 19 No. 4, pp. 216-35.
- Man T.W.Y.; Lau T. and Chan K.F. (2002), "The Competitiveness of Small and Medium Enterprises: A Conceptualization with Focus on Entrepreneurial Competencies", *Journal of Business Venturing*, (vol.17, no.2) pp.123-142. Management, 8.
- Momaya, K., and Selby, K., (1998)."International Competitiveness of the Canadian Construction Industry: A Comparison with Japan and the United States." *Canadian Journal Civil Engineering* 25: 640-652.
- Mpofu, B., Ochieng, E. G., Moobela, C., & Pretorius, A. (2017). Profiling Causative Factors Leading To Construction Project Delays in the United Arab Emirates. *Engineering, Construction and Architectural Management*, 24(2), 346-376.
- Nobre, A. L. (2016, July). Learning Capabilities and Organizational Learning–The Strategic Role of Information Systems in the Knowledge Economy. *In Atas Da Conferência Da Associação Portuguesa De Sistemas De Informação (Vol. 3, No. 3)*.
- OECD (1999) 'Business-to-Business E-commerce: Status, Economic Impact and Policy Implications', *OECD Working Paper*, NO. 77.
- OECD. (2007), Enhancing the Role of SMEs in Global Value Chains- Background Report, Paris. Available on the Internet at: <http://www.oecd.org/dataoecd/27/43/38900592.pdf>.
- Porter, M.E. (1985), *Competitive Strategy: Creating and Sustaining Superior Performance*. The Free Press, New York, NY.
- Porter. (2004), M. E. *Global Competitiveness Report 2004-2005: Findings from the Business Competitiveness Index*. New York, Institute for Strategy and Competitiveness Harvard Business School.
- Puni, A., Agyemang, C. B., & Asamoah, E. S. (2016). Leadership styles, employee turnover intentions and counterproductive work behaviors. *International Journal of Innovative Research and Development*, 5(1), 1-7.
- Rosenau, M. D. and Githens, G. D., (2005). *Successful Project Management: A Step by Step Approach with Practical Examples*. Published by John Wiley and Son, Inc.