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## Determining Significant Factors Influencing Malaysian Construction Business Performance in International Markets

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**Abstract:** Market expansion into foreign markets has become increasingly important for construction businesses, including Malaysian contractors. It is therefore imperative that these firms are able to sustain performance in international markets. This paper aims to determine the significant factors influencing the Malaysian contractors' performance in international markets. This study adopts a mixed method using questionnaires that were sent to 115 construction firms as a sampling frame. The quantitative findings were further validated through in-depth interviews with five firms currently operating at the international level. It was found that the firms' profit targets based on return on investment and revenues supported by the firms' competitive advantages due to employees' capabilities and competencies have significantly influenced the firms' performance. However, further insights disclosed that having strong and stable human relationships were very important to enhancing the firms' performance in international markets. The findings build further understanding of international strategies for construction in developing countries. Finally, the study identifies the need to develop a suitable tool to measure firms' performance by taking into consideration the complex elements within the identified significant influencing factors.

**Keywords:** Construction firms, Factors, International market, Performance, Quantitative, Qualitative

### INTRODUCTION

International market expansion has become increasingly important for construction firms generally, more specifically for Malaysian contractors (Awil and Abdul Aziz, 2001; Lan, 2011; Abdul Aziz et al., 2011). The construction industry is a major sector of Malaysia's economy and is seen by the government as playing a significant role in the nation's economic transformation towards developed country status. Construction projects involve a diverse range of one or more contracting activities in building, infrastructure, mechanical and electrical engineering, power transmission and plant operation, oil and gas transmission, and other construction-related activities.

Malaysian construction businesses, of which contractors are the major participants, have been encouraged by successive governments to develop international strategies. In reality, however, these construction businesses are competing with other well-established contractors from Japan, Korea, China, the United States, the United Kingdom, Italy and other countries that have been in international markets for decades. A review of the Engineering News Record (Engineering News Record, 2013) reveals that none of the Malaysian construction businesses was listed among the top 250 international contractors. Despite the government's encouragement through various plans such as the 10th Malaysian

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Plan (10MP), the third Industrial Malaysia Plan (IMP) and the Construction Industry Malaysian Plan (CIMP), only 115 firms (or approximately 2.2% of all Malaysian construction firms) registered with Construction Industry Development Board (CIDB) Malaysia under Grade 7 and Class A have been operating abroad (CIDB Malaysia, 2013). Hence, as a Malaysian government agency, the CIDB plays a very important role in paving the way for construction firms to establish a foothold in international markets.

There are obviously risks and challenges that contribute to the absence of Malaysian construction contractors in international markets. A preliminary study by Mat Isa, Adnan and Endut (2006) shows that the majority of local contractors are not interested in overseas business due to high political risk and inadequate financial resources. However, the ability to sustain and perform internationally may be determined by different sets of factors from within and outside a firm's environment (Ling, Pham and Hoang, 2009). A review of the past literature suggests that a comprehensive model or framework with existing theory to clearly guide construction firms in adopting effective market entry strategies is still lacking (Abdul Aziz, Wong and Awil, 2008; Enshassi, Mohamed and Abushaban, 2009)

This study aims to investigate the factors influencing the performance of Malaysian contractors in international markets. The paper is structured as follows. A review of the previous literature related to factors influencing performance was carried out. The methodology section then addresses the empirical work, describing the research design with a set of hypotheses developed related to country, firm, market and project factors influencing firms' performance, sampling design and sample selection, the measurement of the dependent and independent variables and the statistical instrument used. The discussion section consolidates the findings of the main results based on the Partial Least Squares – Structural Equation Modelling (PLS-SEM) analysis and the interviews. The discussion leads to a better understanding of firm-related factors influencing firms' performance in international markets. Finally, the paper concludes and covers the limitations of this study and future lines of research.

## **PERFORMANCE**

A major literature review has revealed many performance measures related to international markets (O'Cass and Weerawardena, 2009; Ozorhon et al., 2010; Ozorhon et al., 2011; Rodríguez-Pinto, Rodríguez-Escudero and Gutiérrez-Cillán, 2012). However, the different performance measures indicate a lack of consensus with regard to the concept, especially as it relates to the construction business. In general, it was found that performance of international businesses can be measured through several indicators, such as profitability (Rodríguez-Pinto, Gutiérrez-Cillán and Rodríguez-Escudero, 2007), return on investment (ROI), financial gain or loss, longevity, overall client satisfaction, and achievement on strategic objectives. Performance was also measured using multidimensional measures at the financial and operational levels (Ozorhon et al., 2010), focusing on superior managerial and RandD resources to achieve superior new product performance (Rodríguez-Pinto, Rodríguez-Escudero and Gutiérrez-Cillán, 2012). Rhee (2008) investigates the relationships between firms' technology-based advantages, social network and absorptive capacity and their performance.

However, the majority of the current literature concentrates on manufacturing industries, while theories pertaining to the construction industry have not been widely investigated empirically. Only a relatively small number of studies have focused on factors influencing construction firms' performance in international markets (Awil and Abdul Aziz, 2001; Ozorhan, Dikmen and Birgonul, 2007). Research by Ahmed et al. (2002) revealed and ranked important factors associated with Malaysian contractors' performance in international markets, i.e., technological capability, firm size, firm reputation, project management and specialist expertise, strong equipment support and international experience (Ahmed et al., 2002). Hence, these identified factors have been adopted in this study to substantiate favourable results in construction industry performance.

In line with this, several studies were carried out focusing on performance-based motives and their willingness to expand into overseas markets (Mat Isa, Adnan and Endut, 2006; Hansson and Hedin, 2007; Ahmad and Kitchen, 2008); Idris and Tey, 2011). These studies focused on the desire to solicit orders, exploit leverages and secure competitive advantages to enhance competitive standing (Abdul Aziz, 1993), explore global construction opportunities (Crosthwaite, 2000), counter stagnant domestic markets, spread risks through diversification into new markets, competitively use resources, and take advantage of the opportunities offered by the global economy (Mat Isa, Adnan and Endut, 2006), sustain growth by international diversification (Han et al., 2010), secure contracts through business networks (Abdul Aziz and Wong, 2011), expedite profit generation and market penetration, alongside factors that affect their innovation performance in developed countries (Idris and Tey, 2011) and gain competitive advantages, achieve high ROI and assets, and gain further recognition to improve performance (Mat Isa et al., 2013).

## **FACTORS INFLUENCING FIRM PERFORMANCE**

For construction projects that are known to be highly sensitive to external risks, the location or host country where firms operate significantly influence firm performance. Hence, the selection of host country location is one of the most crucial decisions due to financial and resource constraints along with a multitude of potential risks arising from poor market selection (Ibrahim et al., 2009). However, other major constraints relate to the political, financial, cultural and legal risk of the host country. Firms must be aware of the political stability, tax policies and employment laws of the host country, which would include environmental and industrial safety regulations, and act accordingly to safeguard their interests. For example, the performance of Singaporean firms was found to be influenced by host government attitudes and firms' size relative to the parent (Pangarkar and Lim, 2003). Malaysian contractors' most concerning factor when expanding overseas was the political stability of host countries, as profit can only be recouped over a period of time (Abdul Aziz and Wong, 2008). In addition, a study by Deng and Low (2014) on Chinese contractors identifies critical political factors that were grouped under the macro factors (socio-political instability, internal economic performance, formal and informal institutional quality, external economic interference, and international interactive relations) and micro factors (industry specifics, project features, contractor attributes and interactive

participation). Hence, political stability in the host country plays a very important role in determining a firm's performance.

International construction is exposed to high risks due to market conditions, such as currency fluctuation, currency exchange, restrictions, cultural differences and problems related to a host's country rules and regulations (Zhi, 1995). Hence, international market expansion must be based on a good understanding of the external factors involved, as well as internal factors based on the firm's preparedness to venture abroad (Gunhan and Arditi, 2005). Another factor is the growth of construction operations in international markets due to the lowering of trade barriers, movements of funds and establishment of new operations globally, which has created a platform for interested construction companies to penetrate the international construction market (Ngowi et al., 2005).

Other distinct factors are related to a firm's capabilities to adopt technology, build reputation and practice good management to compete in international markets (Ahmad and Kitchen, 2008). In addition, a firm's strong international experience track record adds to the competitive advantages acquired by firms (Gunhan and Arditi, 2005). Other firm-related factors influencing performance are project management capability, top management support, project manager coordination and leadership skills, monitoring and feedback by clients, decision-making, coordination among project participants, owner competence, social condition, economic condition and climatic condition (Enshassi, Mohamed and Abushaban, 2009). Most of these firm factors are very important for sustaining and improving performance in international markets.

Working in an international setting often requires a much wider view of a project's context compared to a domestic setting where project expertise is often disconnected from other aspects of the business, and international projects manifest more types of risk than domestic projects (Ahmed et al., 2002). At the same time, many construction projects report poor performance due to numerous evidential project causes, such as unavailability of materials, poor coordination among participants, ineffective monitoring and feedback and a lack of project leadership skills (Enshassi, Mohamed and Abushaban, 2009). In summary, the review of the available literature carried out in this study has identified and generated 44 factors related to firm performance in international markets. They were grouped into four constructs, i.e., country, market/industry, firm and project factors, which together form the basis for the theoretical framework in the current study, as shown in Table 1.

Table 1. Factors Related to Firms' Performance in International Market

<b>Items</b>	<b>Factors</b>	<b>Items</b>	<b>Factors</b>
COUNT1	Attitude and intervention of host government	FIRM1	Firm's size
COUNT2	Similarity of host country/market (social/cultural/religious)	FIRM2	Firm's ability to assess market signals and opportunities
COUNT3	Proximity to host country	FIRM3	Firm's level of international experience

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Table 1: (continued)

Items	Factors	Items	Factors
COUNT4	Anticipated noneconomic risks (political, technology)	FIRM4	Long-term and strong management strategic orientations/objectives
COUNT5	Anticipated economic risks (currency fluctuations, interest rates)	FIRM5	Superior management and organisational dynamic capabilities
COUNT6	Other foreign competitors in the host country	FIRM6	Firm's financing capacity
COUNT7	Promotion of export efforts of home government	FIRM7	Firm's competencies (project management, specialist expertise and technology)
COUNT8	Financial support from home country banks	FIRM8	Firm's resources (level of knowledge, and research and development)
COUNT9	Trade relationship between two countries	FIRM9	Firm's risk management attitude
COUNT10	Diplomatic relationship between two countries	FIRM10	Management quality (product, service, human resource)
COUNT11	Host government control: Licensing, restrictions and other FDI requirements	FIRM11	Firm's performance : Profit targets (Return on investment/sales/assets)
MARK1	Market profit potential/attractiveness	FIRM12	Firm performance: Level of knowledge and international experience
MARK2	Market intensity on competition	FIRM13	Uncertainty avoidance
MARK3	Product/service market growth	FIRM14	International business network: Relationship with foreign partners
MARK3	Market entry barriers	FIRM15	Product differentiation: Strong brand name
MARK4	Availability of innovative and entrepreneurial opportunities	FIRM16	Firm reputation
MARK4	Construction demands (finance, labour, material, transport, utilities)	FIRM17	Firm's good track record/competitive advantage
PROJ1	Project size	PERFOR1	Prestige
PROJ2	Project types (e.g., building, manufacturing)	PERFOR2	Business expansion

(continue on next page)

Table 1: (continued)

Items	Factors	Items	Factors
PROJ3	Technical complexity of projects	PERFOR3	Competitive and effective use of resources
PROJ4	Type of clients (public vs. private)	PERFOR4	Competitive advantages
PROJ5	Availability of funds for projects	PERFOR5	Security against bankruptcy
PROJ6	Contract types/ procurement methods: lump sum, cost-plus/ design and build	PERFOR6	Stability
PROJ7	Experience of firm in similar works	PERFOR7	Profit (Return of investment [ROI]/assets/sales)
PROJ8	Existence of strict time limitations		
PROJ9	Existence of strict quality requirements		
PROJ10	Availability of partner/alliance		

## METHODOLOGY

The methodology section begins with a description of the rationale behind the overall research design that has governed this study. It also explains the development of the hypotheses, the design of the questionnaire and data collection, measurements for the constructs based on respondents' opinions, and the various methods of analysis adopted, as well as the discussions of the study's findings. Thereafter, the quantitative and qualitative parts of the study are discussed.

### Research Design

The study adopts an exploratory approach utilising a mix of quantitative and qualitative methods. This approach is particularly suitable when the aim is to understand the "what" and "how" factors that influence firm performance. The mixed method approach is being increasingly adopted in many construction management and engineering studies, for example, (1) strategies and methods in internationalisation (Masum and Fernandez, 2008) (2) and exploring internationalisation by contractors (Abdul Aziz and Wong, 2010). Both the qualitative and quantitative approaches were adopted in a complementary manner to cross validate, triangulate and enhance the findings (Wong, 2012). Hence, this study presents the empirical data from questionnaires and validates the findings through interviews, given that expert rigour was of the utmost importance. The experts were the managers from the Malaysian construction firms

responsible for and/or involved in the international market operations and entry strategies.

### **Hypothesis Development**

From the reviews related to country, firm, market and project factors, the following hypotheses were formed to examine the relationship between the influencing factors and the performance of firms in their international operations:

- H1: There is a significant relationship between country factors and firm performance.
- H2: There is a significant relationship between market factors and firm performance.
- H3: There is a significant relationship between firm factors and firm performance.
- H4: There is a significant relationship between the project factors and firm performance.

The hypotheses developed were tested using the PLS-SEM path modelling and are further explained in the data analysis section of this paper.

### **Data Collection Based On the Questionnaire and Interviews**

The target population for this study consists of Malaysian construction firms currently operating internationally. The unit of analysis was the individual firm. Data collection was carried out in two stages, with the first stage involving survey questionnaires being sent to a sample of 115 Malaysian construction firms registered with the CIDB Malaysia; these firms were known as global players under the Grade 7 and Class A categories operating in more than 50 countries. Most of the questions adopted a five-point Likert scale to gather data for each construct of the research model. The respondents were requested to evaluate 44 factors related to performance based on the level of influence: 1 = No significant influence, 2 = Less influence, 3 = Influence, 4 = Significant influence and 5 = Very significant influence. The instruments were adapted from previous studies and were modified to suit the objectives of this study.

The second stage of data collection involved face-to-face interviews with the five (5) executives who gave their consent in the returned questionnaires. This helped to validate the data collected from the questionnaires. Despite the rigor in data collection and validation, some might still argue that the findings must be treated with a certain degree of caution and limitation given the small sample population.

### **Factors Influencing the Performance of Malaysian Construction Firms in the International Market Using PLS – SEM Path Modelling**

Forty-four factors linked to firm, market, country and project influencing the performance of firms in the international market, reviewed from previous studies, were used as a basis to develop the conceptual framework for this study. Performance is the variable of primary interest (dependent variable), the

variances in which are attempted to be explained through the factors used as the independent variables, forming the conceptual framework of this study. The PLS-SEM was used in this study to respond to the objective that focused on predicting and explaining the variance in the key target construct (performance) using different explanatory constructs (firm factors, market factors, country factors and project factors). This instrument was also selected due to the relatively small sample size (Hair, Ringle and Sarstedt, 2011). However, details of the PLS-SEM analysis are not presented in this paper. Only major findings based on the results of the PLS-SEM analysis are discussed. The conceptual framework is depicted by the research model using PLS-SEM path modelling as shown in Figure 1.

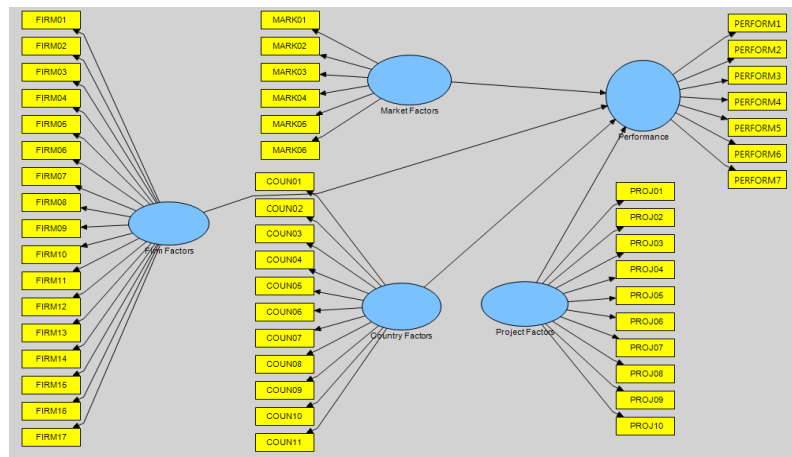


Figure 1. Research Model Using PLS Path Modeling for Factors Influencing Performance of Malaysian Construction Firms in International Market

## FINDINGS AND DISCUSSION

The findings and discussion in this section are based on the consolidation of the quantitative findings from the questionnaires and interview sessions with the experts from the construction firms.

### Quantitative Findings

The sampling frame for the survey is from the CIDB Malaysia 2012/2013 record, which consists of 115 firms operating internationally. The sampling units were the directors, managers and executives in these firms who were involved in international projects under various sectors, such as building, infrastructure, mechanical and electrical engineering, and power transmission. Of the 115 firms, 51 firms responded, resulting in a 44% response rate, which is considered high and acceptable, as most surveys carried out previously in Malaysia only resulted in a response rate of between 10% and 20% (Ramayah et al., 2010). Personal calls and frequent follow-ups were the main reasons for returned questionnaires. The non-



response of the rest of the firms contacted could be due to firms' non-active status, or they may have moved or are no longer involved in overseas projects.

The respondents' designations are general/senior/project managers (11), senior/project/design engineers (7), project/architecture coordinators (2), quantity surveyors (3), vice presidents (2), general/HR managers (3), managing/technical directors (5), project planner (1) and quality/contract/financial managers (11). The respondents also indicated their international experience; close to 50% have more than 10 years, 15% between five and 10 years and the rest (37%) less than five years of experience. Based on the respondents' business locations, it was found that 29% penetrated the ASEAN countries (Singapore, Indonesia, Thailand, Vietnam, Myanmar, Brunei, Philippines and Cambodia) and most (71%) of the firms studied were operating in non-ASEAN countries. Hence, the profile findings indicate that the respondents fulfilled the required international construction background to participate in and provide reliable opinions for the survey.

To determine the most significant factors influencing firm performance in the international market, structural equation modelling known as PLS-SEM was adopted as a quantitative analysis. Figure 2 depicts the PLS-SEM structural model displaying the results of the path analysis for factors influencing performance based on factor loadings and  $\beta$  values, while Figure 3 shows the results of the path analysis with t-values between the constructs under study. The values are listed in Table 1 and Table 2 and are explained in the following sections.

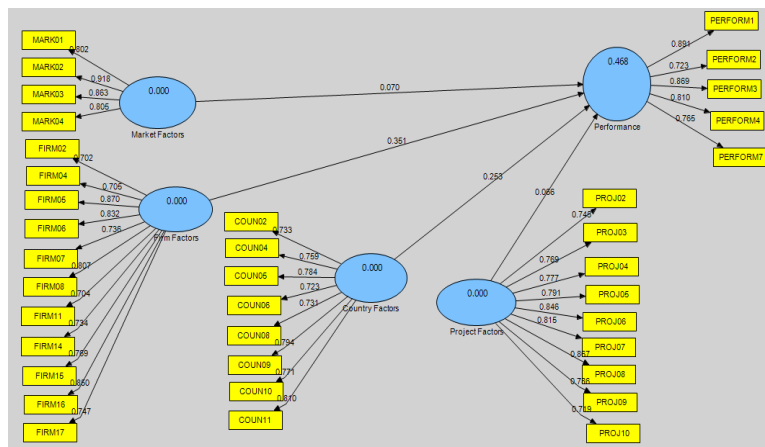


Figure 2. The PLS-SEM Structural Model with Results of the Path Analysis for Factors Influencing Performance with Loadings and  $\beta$  Values

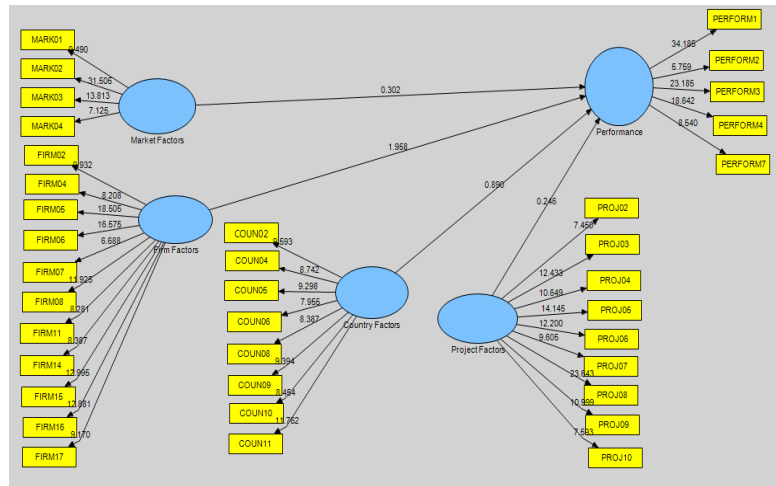


Figure 3. The PLS-SEM Structural Model with Results of the Path Analysis with *t*-Values between Constructs

Table 2 presents the quantitative results of the hypothesis testing. H1, H2, H3 and H4 examine the relationships between each construct (country, firm, market and project factors) and firm performance based on the questionnaires.

Table 2. Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	$\beta$ Coefficient	SE	<i>t</i> -Values	Supported
H1	Country factors → Performance	0.253	0.285	0.890	No
H2	Firm factors → Performance	0.351	0.179	1.958	Yes
H3	Market factors → Performance	0.070	0.232	0.302	No
H4	Project factors → Performance	0.066	0.267	0.246	No

*t*-values > 1.671\*(*p* < 0.05); *t*-values > 2.33\*\*(*p* < 0.01)

The results show that only H2 exhibits a significant positive relationship between the firm factors and the performance of the firms in international markets. Hence, the firm factors ( $\beta = 0.351, p < 0.05$ ) are positively related to the performance of the firms, representing 46.8% of the variance with  $R^2 = 0.468$  (refer Figure 3), thus supporting H2. However, the other hypotheses (H1, H3 and H4) were not supported.

Because only one out of four constructs of the factors demonstrated a significant relationship with the performance of the firms, the following discussion focuses only on these significant firm factors. Furthermore, the PLS-SEM model shown in Figure 2 and Figure 3 has generated five significant performance measurements together with 11 significant firm factors, with their respective loadings as displayed in Table 3 and Table 4.

Table 3. Significant Performance Measurements with Loadings from the PLS-SEM Path Results

Performance	Measurement	Loadings
PERFORM1	Prestige: Recognition and good reputation in international markets	0.891
PERFORM2	Business expansion: Establishment of new markets for construction business	0.723
PERFORM3	Competitive and effective use of resources	0.869
PERFORM4	Competitive advantage: Results of good project management, technology and technical capabilities, and operational expertise	0.810
PERFORM7	Profits: Return of investment/assets/sales resulting in growth of company and maximise stakeholders' return	0.765

Table 4. Significant Firm Factors Influencing Performance with Loadings from the PLS-SEM Path Results

Firm Factors	Statement	Loadings
FIRM02	Firm's ability to assess market signals and opportunities	0.702
FIRM04	Firm's long-term and strong management strategic orientation/objectives	0.705
FIRM05	Firm's superior management and organisational dynamic capabilities	0.870
FIRM06	Firm's strong financing capacity	0.832
FIRM07	Firm's strong competencies: Project management, specialist expertise and technology	0.736
FIRM08	Firm's strong resources: Level of knowledge and R&D	0.807
FIRM11	Firm's profit targets: Return on investment/sales/assets	0.704
FIRM12	Firm's level of knowledge and international experience	0.734
FIRM15	Firm's product differentiation: Strong brand name	0.769
FIRM16	Firm's reputation	0.850
FIRM17	Firm's good track record/competitive advantage	0.747

Under performance measurements, there were seven items initially used in the quantitative analysis. However, the PLS-SEM analysis revealed only five significant performance items, which are (1) prestige in terms of recognition and good reputation in the international market, (2) competitive and effective use of resources, (3) competitive advantages: results of good project management, technology and technical capabilities, and operational expertise, (4) business expansion through establishment of new markets for construction business and (5) ROI/assets/sales resulting in company growth and maximisation of stakeholder returns.

Similarly, for the firm factors, 17 items were initially used as the measurements. However, the PLS-SEM path modelling confirmed only 11 items that

significantly influenced firm performance (refer to Table 3), which are ranked as follows: (1) a firm's superior management and organisational dynamic capabilities' (2) a firm's reputation, (3) a firm's strong financing capacity, (4) a firm's strong resources based on level of knowledge, research and development, (5) a firm's product differentiation based on a strong brand name, (6) a firm's good track record/competitive advantage, (7) a firm's strong competencies in project management, specialist expertise and technology, (8) a firm's level of knowledge based on international experience, (9) a firm's long-term and strong management strategic orientation/objectives, (10) a firm's profit targets based on ROI/sales/assets and (11) a firm's ability to assess market signals and opportunities.

The quantitative findings are further supported and validated by the interview sessions with five experienced interviewees discussed in the following section.

### **Qualitative Findings**

Five respondents agreed to be interviewed to share more insights on their firms' performance. The interviewees' designations are as follows: a project manager (architect) from Firm 1, a project manager (planning) from Firm 2, a senior project planner from Firm 3, a project planner from Firm 4 and a senior project engineer from Firm 5. They have five to 10 years of international experience, which qualifies them to offer valid opinions and statements regarding their firms' international operations. The respondents stated that their firms have penetrated both the ASEAN (Singapore, Indonesia, and Thailand) and non-ASEAN (India, Saudi Arabia, Switzerland and the United Arab Emirates) countries.

### **CONSOLIDATION OF QUANTITATIVE AND QUALITATIVE FINDINGS**

To simplify presentation and increase clarity in the discussion, the factors and performance measurements having similar concepts or related themes are grouped as shown in Table 5.

#### **Firms' Strategic Management Capabilities Linked to Profit Targets**

The firm factor is essentially related to the firm's strategic management capabilities such as planning long-term strategic orientation (mission and vision) and objectives. In addition, with superior management and organisational dynamic capabilities (Cuervo and Pheng, 2003), the firms have acquired the ability to assess market signals and opportunities in international markets. During the interviews, Firm 1 admitted that its top management has established strong relationships with other foreign multinational corporations (MNCs). In addition, Firm 2 also believed that superior management with organisational dynamic capabilities motivated them to gain international experience by operating in India, Singapore, the United Arab Emirates (UAE) and other countries. Hence, top management's perception on how international operations' benefit their firms' strategies to fulfil long-term objectives was considered very important (Abdul Aziz and Wong, 2010).

Table 5. Firm Factors Influencing Firms' Performance

No.	Group	Firm Factors	Performance Measurements
1	Firm's strategic management capabilities	Long-term and strong management strategic orientation/objectives, superior management and organisational dynamic capabilities, ability to assess market signals and opportunities	1. Profit targets based on ROI, brand name, recognition and reputation
2	Firm's internal capabilities	International experience, product differentiation (strong brand name), reputation, track record as competitive advantages	2. Prestige (recognition and reputation)
3	Firm's resources capability	Finance, knowledge based on research and development, competencies (project management, specialist expertise and technology)	3. Competitive advantages 4. Effective use of resources
4	Further insights	Market entry strategies (entry timing and mode) and stability of human relationships	5. Business expansion

A strategic planning division based at the headquarters was responsible for all international projects undertaken by Firm 3 and Firm 5. A recent study by García-Villaverde, Ruiz-Ortega and Parra-Requena (2012) further supports the idea that firms' perceptions on levels of competition affect their performance based on the uncertainty of the market environment and the lack of information related to opportunities. Firm 5, through its strategic planning division, assesses the market signals and explores opportunities both locally and internationally by gathering the required information on current and future projects. However, final selections and decisions were propelled by top management, as exposed by Firm 4.

Furthermore, Firm 1 believed that the strategic management and objectives have provided the company with a good blueprint. Even though Firm 1 argued that its vision and direction were not easily accepted by staff members, Firm 2 recommended that its management develop a step-by-step process and standard operating procedure (SOP) to help staff members understand the vision, mission, purpose and objectives of the firm's internationalisation. Firm 3 affirmed that an established process provides a benchmark based on stages of internationalisation. Hence, Firm 4 and Firm 5 agreed that to be successful, a standard process of internationalisation should be established and practiced by the firms.

Based on the interviews, it was found that with a thorough and systematic internationalisation process, the firms were able to reduce the psychic distance to speed up the market entry selection and reduce other risks that existed before the process of internationalisation began. However, Firm 3 cautioned that market entry barriers and institutional constraints exist during international market expansion. Thus, Firm 3 suggested that the establishment of an international business network (Abdul Aziz and Wong, 2011) that has strong relationships with foreign partners is also crucial to persevere in international markets. Hence, the firm has established a group strategy department to build collaboration with other international firms during seminars, conventions and any other closed meetings

and discussions. Firm 5 also suggested that in addition to having a good relationship with MNCs in the host country, firms must also have very strong financial support that indicates that they have strategically targeted profits through high ROI, sales and assets.

Profitability was found to be one of the most important goals related to firm performance in international construction. The empirical results reveal that the profit targets based on the return of investment (ROI), sales and assets was the key factor concerning firms' performance in international markets. This finding is well supported by a previous study, which argues that the expansion of a company's activities to overseas locations offers profitable opportunities when domestic markets are not doing well (Gunhan and Arditi, 2005). Another study also revealed similar responses from the companies surveyed, which stressed that "long-term profitability" was their reason for operating and becoming successful internationally (Crosthwaite, 2000). This justification of higher profitability may stem from the need to counterbalance greater risks, such as political, economic and legal risks (Ling, Pham and Hoang, 2009), and efforts made to set up their international operations. A previous study highlighted this point by emphasising that the decision to enter a new foreign market is of critical importance for a company's profit-making ability and sustainable growth (Chen et al., 2007). These findings on firms' profit-oriented endeavours were based on qualitative elements. However, when the interviewees were asked to quantify the profits generated, Firm 1 and Firm 2 admitted that the revenues from their international projects only yielded approximately 25%–30%. Firm 3's international operations, in contrast, have contributed the highest percentage to the firms' revenue, which is between 55% and 70% of profit, while Firm 4 and Firm 5 disclosed a higher return ranging from 50% to 60% of yearly profits.

In conclusion, the findings indicate that firms with superior management and organisational dynamic capabilities, as well as an established mission and vision, have boldly entered the unfamiliar foreign market and absorbed the inherent risks of financial and operating costs associated with product/service and market development (Loo and Abdul Rahman, 2012). However, firms must be cautious with the contractual risks for operations that require higher financial and operational stakes involving greater investment commitment in the foreign environment (Polat and Donmez, 2010). Hence, profit targets to gain high returns and revenues to counterbalance the risks are vital to ensuring firms' sustainability and performance in international markets.

### **Firm's Internal Capabilities Linked to Prestige**

The quantitative findings show that firm factors are linked to firms' internal capabilities, which have resulted in a good reputation with product differentiation and a strong brand name, high recognition due to an established track record, knowledge and international experience (Carlsson, Nordegren and Sjöholm, 2005). These elements have provided competitive advantages for firms to be recognised in international markets. The interviewee from Firm 2 agreed that with the establishment of a reputation based on performance related to good project management skills, specialist expertise and technology, there is a high probability that the firm will be recommended or invited for certain projects, even though sometimes the opportunities might come with political risks (Ashley and Bonner,

1988). However, Firm 1 disclosed that despite having a good reputation and stability, their profits based on return on investment (ROI) increased with involvement in high impact projects. Furthermore, firm performance can also be measured based on business expansion and reputation that further enhance the firm's financial capacity. This was also supported by Firm 3, Firm 4 and Firm 5.

All firms agreed that level of international experience has also significantly influenced their performance. They acknowledged that through involvement and participation in international projects, they gained useful experience, knowledge, skills, technology and expertise. These findings substantiate a study carried out by Gunhan and Arditi (2005), who found that track record was the most important factor contributing to the performance of firms. The findings are also in line with a study by Guler and Guillén (2009), which states that as firms accumulate international experience, they develop competitive advantages for foreign market entry. However, the firms need sufficient time to gain more international experience, which may lead to a lack of performance among them, as they require more preparation to overcome constraints and risks related to international construction. The findings in this study also indicate that acquired experience is very important to solve similar problems that might be encountered in future projects. This factor has been hypothesised by Ozorhon, Dikmen and Birgonul (2007), who stated that as the level of experience in similar jobs increases, the ability to take the job increases, which in turns leads to a stronger competitive position and improved performance.

The interviewee from Firm 1 acknowledged that being recognised based on performance has enhanced their reputation in international markets. In addition, Firm 2 believed that it is important to improve and develop a strong brand name based on product differentiation that allows them to be recognised worldwide as a successful firm (Papadopoulos and Martín, 2011). This suggests that past successes create prestige based on recognition and superior reputation, providing motivational factors for firms to be successful in their ventures.

### **Firms' Resources Capability Linked to Competitive Advantages and Business Expansion**

The next factor is related to firm resource capabilities, such as finance, knowledge based on research and development, and staff competencies in project management, specialist expertise and technology-based advantages (Rhee, 2008), which have also influenced firms' performance. This finding is parallel with previous studies that revealed Vietnamese and Chinese contractors lagging behind their competitors due to weak financial capacity (Zhao, Shen and Zuo, 2009), lack of capabilities and commitment to research and development, inadequate design capacity, lack of highly skilled labour and low productivity, lack of familiarity with the local system, language disadvantage, unfamiliarity with modern project management techniques, inferiority in design and technical ability and lack of experience in international projects (Ozorhon, Dikmen and Birgonul, 2007; Ling and Gui, 2009). However, Firm 1 disclosed that its resource capabilities have moderately influenced firm performance, as the commitment was fully handled by the top management without affecting the technical and sub-professional staff members. Thus, Firm 2 and Firm 5 believed that strong resources are crucial in influencing firm performance, especially at the beginning of the

operation. Hence, the top management has taken effective steps by appointing experienced staff members and professionals with good international network links with the foreign partners. Firm 3 insisted that although the resources were adequate at the early stage, a high commitment level was crucial, requiring the firm to put an aggressive and concerted effort into handling the process involved and thus be successful in the operations. In addition, Firm 4 agreed that adequate resource commitment has influenced their performance and was definitely one of the most important elements in their internationalisation process.

It was also noticeable that construction firms may establish or learn about technological innovation for overseas activities; for example, the limited use of information and communication technology (ICT) by Chinese international contractors constrained them when it came to achieving better performance in international markets (Lu et al., 2013). Consequently, by using ICT, Malaysian firms can either integrate with the local partner or take up the role of the contributing partner to increase their technological capability to achieve better performance. It was also found that to successfully perform in international markets or to be distinct from other foreign competitors, the firms admitted that acquiring comprehensive and specific technical expertise and project management capabilities is required (Ngowi et al., 2005). Expertise in terms of technology also enhanced their capability when handling international projects. This finding is observed in another study in which Chinese contractors preferred to adopt more sophisticated technology and methodology that were easily transferable to international markets (Zhao, Shen and Zuo, 2009).

These competencies are required so that companies can endure the increasing threats and uncertainties of the rapidly changing international market environment (Gunhan and Arditi, 2005; Marco, Taylor and Alin, 2010). Corresponding to this, Ozorhon et al. (2007) recommended that international contractors offer their strengths for distinguished products and services, thus complementing local contractors who are behind in regard to design and technical capability, project management skills and financial capacity. In return, the operation costs could be lowered, and at the same time, they can adapt comfortably to the local cultures and industry practices and finally perform internationally (Ozorhon et al., 2010).

In relation to human resource development, Firm 2 emphasised that staff competency and accreditation are crucial; for the past three years, Firm 2 has been encouraging their technical staff members to obtain certification as Certified Project Management Personnel (PMP), Certified Construction Project Manager (CCPM) and Professional Engineer (PE). Together with a strong financial foundation, Firm 3 has established a good reputation through staff project management competency to ensure the firm's survival in international markets to help them adapt to the host political and cultural factors. Firm 4 echoed opinions similar to those of Firm 3 whereby a good relationship with other countries must be established along with the necessary preparations to develop competent staff members and supported by strong financial capacity to continuously excel in business ventures.

In relation to finance aspects, Firm 5 acknowledged the fact that to be able to survive in international markets, they must have strong a financial background coupled with the best use of resources as well as appropriate adaptation to a host country's political and cultural factors. In addition, they



agreed that firms must acquire strong financing capacity to secure the material resources and be able to overcome the increase in cost of labour, materials and equipment, which are critical to project delivery and firm performance. International projects are valuable in price and often involve complex undertaking. Hence, Firm 3 expressed opinions that having strong resources is critical in preparing sufficient equipment, materials and labour for their foreign investments, while Firm 4 highlighted that being a reputable firm requires competitive advantages, such as project management and technical capabilities as well as operational expertise (Lu et al., 2013). Furthermore, Firm 5 emphasised that having these competitive advantages has resulted in high revenue and good performance. Therefore, firms must strategically plan their business expansion locally to ensure their survival in the international market. Firm 1 insisted that a basic study on the opportunities and analysis of the firm's strengths and capabilities must be conducted and evaluated before pursuing international market expansion (Lu, 2010).

Firm 1, Firm 2 and Firm 4 agreed that firm performance is based on the business expansion strategies that move towards the establishment of new markets for construction business. Accordingly, the wide business expansion strategies increased the firm's recognition, improved their reputation and ultimately increased profits and returns as a result of their involvement in high impact projects, which is also indicated by Firm 4 and Firm 5. Additionally, Firm 3 emphasised the fact that a firm's reputation and its security against bankruptcy also indicate its performance in achieving the mission and vision established by the top management (Hutzschenreuter and Horstkotte, 2013). It can be clearly seen that Firm 1 is very forward thinking in its business expansion plans in the establishment of new markets. Additional opinions related to firm survival came from Firm 4, where it is observed that performance can be measured based on the credibility and the capability of firms to survive in international markets. Even though the increase in profits is one of the firm's targets in undertaking the high level projects in the host country, firms' ability to survive in the harsh and turbulent economy is also very important in their quest to grow their businesses. Thus, the findings from the interviews validated most of the quantitative findings and revealed some additional information as a contribution to the international body of knowledge, as discussed in the next section.

#### **Further Insights on Other Market Entry Strategies (Entry Timing and Mode) and Stability of Human Relationships Linked to Competitive Advantages, Profit, Prestige and Business Expansion**

Further insights related to entry timing were obtained from the interviews. The early movers usually came from developed countries, while the late movers were mostly from emerging or developing countries that expanded into the foreign market after its consolidation (Borini, Fleury and Urban, 2006). Firm 1 and Firm 5 revealed that the lack of a step-by-step implementation process for internationalisation has resulted in their firms' expansion as late entrants into international markets.

Along this line, the interviews shed some light on the entry mode arrangements that were adopted by the construction firms. Chen and Messner (2011) found some of the country and firm-related factors influencing construction firms' market entry mode selections (either permanent or mobile mode), including

home market attractiveness, uncertainty avoidance, long-term orientation, firm size, and multinational experience. The interview with Firm 1 disclosed that the strategy in undertaking a number of joint venture (JV) projects with other international companies is based on the strong relationship the firms' top management has with various MNCs, which has resulted in risk reduction in international markets. They developed these relationships earlier through local projects in their home countries. Supporting these previous findings, Firm 1 believed that the relevant home and host government agencies and business networks also play important roles. Firm 2 also adopted joint ventures and mergers of companies in their international projects, while Firm 4 acquired the experience of partnership and groups of companies. Nevertheless, Firm 3 preferred their entry mode strategy to be in the form of wholly owned subsidiaries. For example, Firm 2 already set up a foothold quite a long time ago in Switzerland, while Firm 3 has established its branches and appointed representatives at identified regions to scout for business opportunities and development. They were involved in business sharing and trade relationships with their foreign counterparts. Firm 4 celebrated its 30th year anniversary in 2012 to mark three decades of growth, progress and achievements as well as endeavour, enterprise and excellence. Furthermore, in the near future, Firm 4 has successfully secure three projects in Chennai, India and two in Riyadh, Saudi Arabia. In addition to the insights, Firm 2 argued that performance should not be measured based only on the competitive advantages that the firms have acquired but also on the profits generated, the stability of the firms and the relationships between the employers and employee. Most importantly, maintaining a strong and stable relationship was found to be very important to retain good employees and prevent the loss of key employees with specialist expertise and technology. Hence, the firms have strategically exploited their manpower capabilities to seize future opportunities by building employees' capacity and core competency to induce competitive advantage and build market share in international markets (Konnur and Hundekar, 2008).

## **SUMMARY AND CONCLUSIONS**

In this study, the quantitative analysis using PLS-SEM has revealed that firm factors have significantly influenced the performance of Malaysian construction firms in international markets. Furthermore, the qualitative analysis based on interviews has supported the quantitative findings and revealed other insights related to the market entry strategies of the contractors' firms.

Hence, this study makes several contributions. First, empirically, it was found that firm factors had significantly influenced the performance of the Malaysian construction firms in international markets. The findings show that firms with superior management and dynamic capabilities have moved forward to achieve their long-term and strategic objectives by targeting profits based on high return of investment, sales and assets. To achieve the firms' strategic objectives, they have acquired strong resources in terms of finances, technical competencies, technology, knowledge and experience. These have resulted in the firms' good reputation and recognition with strong brand names in international construction markets.

Second, based on the qualitative analysis, this study further enhances the theory related to the market entry strategy body of knowledge. The results of the content analysis strongly support and validate the empirical findings, whereby the performance of all firms studied is highly influenced by various factors such as their strategic orientation capabilities and strong resources in terms of finances, materials and, most importantly, the human capabilities supported by strong and stable relationships among employers and employees. The tangible profits and revenues targeted, together with other intangible elements, such as prestige, business expansion, security and competitive advantages, are among the significant performance measurements that have contributed to this study. Further insights on other market entry strategies, such as entry timing and mode, and the stability of human relationships were found to contribute to firms' performance based on competitive advantages, profit, prestige, and business expansion.

Third, the PLS-SEM path modelling developed in this study contributes to the method of analysis with respect to the sample size used in this study. The PLS-SEM path analysis was validated both in terms of measurement and structural models based on the reliability and validity results discussed earlier in this paper.

This current study takes into consideration and is limited to only some aspects of the country, firm, market and project factors influencing the construction firms' performance in the international market. Hence, the complexities and implications of each factor in terms of performance were not considered and measured in the scope of the current study. Hence, further research could be carried out to develop a suitable tool for measuring firm performance by taking into consideration more complex elements related to the significant influencing factors identified in this study.

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