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Entry Location and Entry Timing (ELET) Decision Model for International Construction Firms

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Abstract

This paper proposes a model for entry location (EL) and entry timing (ET) decisions to guide construction firms in accessing targeted international markets. Neglecting to properly choose the right combination of the entry location and entry timing (ELET) decisions can lead to poor performance of the firms' international ventures. The sampling frame was from the Malaysian construction firms that have undertaken and completed projects abroad. Survey questionnaires sent to 115 firms registered with Construction Industry Development Board (CIDB) Malaysia, operating in more than 50 countries, achieved a 39.1 per cent response rate. Based on a comprehensive statistical analysis of survey data it was found that the mutually inclusive significant factors that influenced the firms' ELET decisions were: the firm's ability to assess market signals and opportunities, international experience, financial capacity, competencies and capabilities (project management, specialist expertise and technology), resources (level of knowledge based on research and development), experience in similar works, financial support from the home country banks, technical complexities of projects and availability of funds for projects. Hence, the present research builds on and extends the literature on the ELET decisions in a more integrated way.

Keywords: Entry location, entry timing, resource-based view, international markets, Malaysian construction firms.

Introduction

Market expansion is one of the most critical business strategies made by firms to exploit opportunities in international markets. These firms have gained access to foreign countries using combinations of market entry strategies and have been gradually extending their operations including Malaysian firms. However, the Engineering News Record (2013) revealed none of Malaysian construction firms was listed in the top 250 international contractors. Despite government encouragement through various plans such as the 10th Malaysian Plan (10MP), 3rd Industrial Malaysia Plan (IMP) and Construction Industry Malaysian Plan (CIMP), only 115 Malaysian construction firms have worked abroad undertaking various construction projects, ranging from infrastructure, building and other construction related projects (CIDB Malaysia 2013) since 1986. CIDB Malaysia records about 35% of these firms have been operating within the ASEAN (Association of Southeast Asian Nations), while more than 65% of the firms have penetrated the non-ASEAN. The ASEAN include Malaysia, Singapore, Thailand, Vietnam, Laos, Myanmar, Cambodia, Indonesia, Philippines and Brunei.

Within the international market domain, some of the main obstacles or barriers to entry identified by previous researchers on Malaysian construction firms were trade and investment barriers (Kaur & Sandhu 2014), insufficient information to access markets, lack of financial, advanced technology and technical resources, lack of economies of scale and scope, high market structure and competition against other foreign firms (Che Ibrahim et al. 2009). In addition, there were studies on other aspects of international Malaysian construction firms such as the firms' business locations (Abdul-Aziz & Sing-sing 2008; Che

Ibrahim et al. 2009), risks and challenges, competitive assets (Abdul-Aziz & Wong 2010) and strength, weakness, opportunity and threat attributes (Mat Isa et al. 2012).

Research has shown that adopting suitable market entry strategies is crucial in a firm's decision to enter and subsequently to perform in international markets. Hence, many researchers have proposed different plans for crafting the right combination of international market entry strategies (Luo 1998; Luo & Peng1998; Yean et al. 2008; Chen & Orr 2009; Polat & Donmez 2010; Lee et al. 2011). During market expansion, firms addressed three major entry strategic questions specifically; which location to enter (EL), when to enter (ET) and how to enter (EM) (Gaba et al. 2002). Similarly, Ekeledo (2007) contended that the choice of which country to enter, when to enter and how to enter commits a firm to operating on a given terrain and lays the foundation for its future international expansion. Even though Huang and Sternquist (2007) have stressed that these interlinking decisions were among the dilemmas that challenge firms during their international expansion, previous studies have primarily addressed each entry decision in an isolated way as shown by Dacko (2002) on ET, Somlev and Hoshino (2005) on EL and Chen and Messner (2009) on EM decisions.

Generally, solving these problems was attempted by the researchers based on the three streams of research in international business and strategic management related to the EL, ET and EM decisions respectively. Out of these three entry decision dimensions, most of the classic and current literature regarding internationalization process has focused mainly on the EM decision (Agarwal & Ramaswami 1992; Ekeledo & Sivakumar 1998; Tawanda 2006; Chen et al. 2007; Che Ibrahim et al. 2009; Chen & Chang 2011). In comparison, the EL decision has received less attention from researchers in international business (Koch 2001a; Koch 2001b; Gallego et al. 2009; Gaston-Breton & Martín 2011). Even though the importance of EL decision that emerged from the relationship between EL and EM decision (Koch 2001a; Koch 2001b; Boeh & Beamish 2012) and segmentation in the process leading to the identification of promising European target markets (Gaston-Breton & Martín 2011) has been somewhat acknowledged, the ET decision dimension has been the most neglected in international research areas (Luo & Peng 1998; Gao & Pan 2010). It is important to understand the firms' ET decision as claimed by Dacko (2002), where firms normally face a particularly difficult decision when planning the right time to enter a foreign market. Thus, the ET decision of foreign direct investment (FDI) also plays a critical role in multinational corporations' (MNCs) market entry strategy (Luo & Peng 1998). Green, Sedef and Bjorn (2004) asserted that ET decision may affect the firm's competitive position, especially on the ability and competency of a firm to fulfill its objectives in order to attain or even sustain its competitive edge.

Gallego et al (2009) argued that very few studies have attempted to establish relationships between these three interlinking decisions in an integrative manner. Hence, the issues were further addressed by establishing a model that illustrates the influence of ET on EM, influence of ET on EL and influence of EL on EM into international markets (Gallego et al. 2009). However, this model only focused on the influence of dependent variables on each other and only considered five dimensions of independent variables, that is; knowledge, resources, product and process innovation, mimicry and situational uncertainty that have a bearing on these three entry decisions and has ignored the influence of significant factors on them. Thus there still remain a number of questions that need to be addressed, especially in choosing a different combination of market entry decisions such as the EL and ET decisions and determining the significant influential factors on these entry decisions to enter international markets. Hence, the research on which this paper is based, aims to empirically determine the factors influencing EL and ET decisions of construction firms in international markets.

Literature Review

Factors Influencing Entry Location (EL) Decisions

Based on the reviews of factors related to EL decision, the following discussions are grouped into four main factors: country, market/industry, firm and project. It was found that most of the researchers have considered firm factors in their studies.

Country factors were amongst the important factors considered in the EL decision. Pioneering research by El-higzi (1999) on Australian construction firms, focused on the risk factors that influenced the firms' decision to internationalize their operations, how the interplay to influence the EL decision of a foreign country is related to country factors such as the host country's political stability, foreign exchange control, trade barriers, tax discrimination, home government policy towards foreign investment, tax incentives with host country, and home country market demand fluctuation. Further, Abdul-Aziz and Wong (2010) evaluated a wider range of country factors influencing the Malaysian contractors in making the go/no go decision to enter foreign markets. The factors include political stability, taxation and incentive, law and order, host government delivery system/bureaucratic efficiency, host government's integrity and transparency, host government's encouragement, language and culture similarity and visa requirements. More recent literature focuses on more in-depth research related to factors influencing the EL decision, however still dwelling on the similar country factors namely; home country government support, well-established host country institutions (Lu et al. 2014), attitude and intervention of host government, host government control on licensing, restrictions and other FDI requirements (Mat Isa et al. 2013), travel time and liability of distance (Boeh & Beamish 2012), host–home country linkages, host–home country specific advantages (Buckley, Forsans & Munjal 2012), local density of home-country affiliates (Zhu et al. 2012), and distance factors (Malhotra, Sivakumar & Zhu 2009).

The next important influential factor is related to the market factors, for example the market size, high economic performance, competition intensity in host country, availability of finance, intensity of competition in home country, and reliable and timely information (El-higzi 1999); market growth, rapid economic development, market size, business cost, financial freedom, market openness, exchange rate, foreign competition, connection and degree of business interaction (Abdul-Aziz & Wong 2010). Sakarya et al. (2007) claimed that traditional market EL analysis relies on purely macroeconomic and political factors and fails to account for the market's dynamism such as growth and opportunities for future works. The findings indicated that strong future market potential, manageable level of cultural distance, supportive and developing local industry and positive customer receptiveness for foreign products and business were very important in the firms' market EL.

The firm factors being studied were the profit repatriation, desire to expand strategically, firm's strength in know-how (El-higzi 1999), capital requirement, local competition, technological capability, geographical distance, trained workforce, ease of obtaining financial funding (Abdul-Aziz & Wong 2010), enhanced organizational capabilities, accumulation of experiential knowledge and capabilities based on prior entry experience (Lu et al. 2014), strong financing capacity, experience in similar works (Mat Isa et al. 2013), prior experience in the local market (Zhu et al. 2012), resources of firms, firm internationalization market-seeking and labor-seeking strategies (Jain 2010), financial strength, project management skill, and international network (Che Ibrahim et al. 2009).

Relative to the resource based view, firm factors such as resources and capabilities are the main elements being investigated by the majority of the researchers. These firm resource-based capabilities are the internal factors that shape the firm's competitive advantages commonly used during their international operations. It started with the firms' vision and mission with the desire to expand using market and labor seeking strategies. Targeting profit repatriation and using the firm's know-how and project management skill, international network, accumulated experiential knowledge and enhanced organizational capabilities the firms were encouraged to penetrate the highly risky international markets. However, based on the project capital requirements, they must have strong financing capacity or be able to get financial funding in order to compete and sustain their place in the international markets.

In addition, some of the project factors based on previous research were project funding, project nature and future potential (El-higzi 1999), infrastructure and other related and supporting industries (Abdul-Aziz and Sing-sing 2008), and the availability of project funds (Mat Isa et al. 2013a). Hence, to address the gap, the research question in this paper was whether and how significantly these factors influenced the firms' EL decision.

Factors Influencing Entry Timing (ET) Decisions

This section further analyzes the influential factors related to ET decisions based on previous studies. The application of the resource-based view is also incorporated in the firm factors discussion, since the majority of the researchers have also considered these factors in their studies.

Previously, a number of researchers have attempted to determine influential factors for ET decisions for international firms under various industries. Under country factors, in their study, Lilien and Yoon (1990) have included the competition elements such as the entry competition and demand potential. The reviews revealed that the researchers also focused on the market factors such as the demand potential, market evolution and marketing rivalry (Lilien & Yoon 1990), foreign market stability, and degree of globalization in the industry (Petersen & Pedersen 1999), environmental conditions, namely market dynamism and market rivalry (Villaverde & Ortega 2007) and type of industry (Tsou, Yu & Lin 2009). In addition to the recent literature, Stevens and Dykes (2013) studied the influence of the country factors namely; home country cultural attributes, host country's political environment.

Next, under the firm factors Stevens and Dykes (2013) focused on the firms' high performance orientation, high power distance and high uncertainty avoidance cultures. Other firm factors studied by other researchers are international experience, level of knowledge, research & development, project management, specialist expertise and technology, financing capacity (Mat Isa et al. 2013b), managerial, marketing, technological capabilities (Villaverde & Ortega, 2007), firms' resources and capabilities (Lieberman & Montgomery 1998), whether the company is producing manufactured goods or services, foreign market entry motives, company size, similar experience with foreign markets entered (Petersen & Pedersen 1999), firms' product technology strategies for example in offering products based on the technology standard and products incorporating the latest technology, pre-entry experience (Bayus & Agarwal 2007), firm size, research and development intensity (Tsou, Yu & Lin 2009; Lilien & Yoon 1990); firm factor (research and development competition) and also the project factor (product competition).

The earlier study by Lieberman and Montgomery (1998) explained that the firms' ET decisions were subject to the firms' internal factors, whether they are strong and confident enough to be the early movers or whether they have to wait-and-see to be the late movers. Hence, larger firms with strong tangible assets, having greater access to financing, were found to enter the foreign market early (Petersen and Pedersen 1999). In his review, Peng (2001) claimed that the resource-based view (RBV) of the firm has influenced the theoretical perspective in international business research. The RBV indicates that firms' resource capabilities allow the firms to achieve sustainable competitive advantages and successful firms usually possess proprietary assets to sustain better performance. Hence, the previous studies show that firms with strong resource capabilities and competencies have significantly influenced that firm's ET decision into an international market. Thus, these firms are likely to be among the early movers entering into a particular market, since their competitive advantages will offset the uncertainty and information disadvantages that are most profound for international entrants (Delios, Gaur & Makino 2007). In addition, Bayus and Agarwal (2007) indicated that ET decision plays an important role related to the pre-entry experience and firm survival, while Tsou, Yu and Lin (2009) later found that in addition to the industry type and host country environment, the firm size, and research and development intensity were the factors influencing the ET decision for Taiwanese firms in China. Hence, firms with competitive advantages entered early and performed better as compared to the late entrants. However, low growth market was also found to influence the firms to enter late into foreign markets.

In summary, the internal factors that commonly influence the ET decision are related to the firm's resource capabilities in terms of size, financial, physical and intangible assets. These are the manifestation of the firm's strengths in terms of skills, competencies and competitive advantages in order to be sustainable and perform in the international markets. On the other hand, external factors found to relate to the international market environment were identified as competition, market growth, uncertainties and information. Hence, to address the gap, the research question in this paper was whether and how significantly these factors influenced the firms' ET decision.

A Proposed Model of Factors influencing ELET Decisions

The evaluation on the literature reviewed has identified forty-four (44) factors influencing the EL and ET decisions related to both construction and non-construction businesses in international markets. These are the independent variables representing the following: country factors such as attitude and intervention of host government, similarity of host country/market (social/cultural/religious), proximity to host country, anticipated non-economic risks (political, technology) and economic risks (currency fluctuations, interest rates), other foreign competitors in the host country, promotion of export efforts of home government, financial support from home country banks, trade relationship between two countries, diplomatic relationship between two countries, host government control: licensing, restrictions and other foreign direct investment requirements, market/industry factors such as market profit potential/attractiveness, market intensity on competition, product/service market growth, market entry barriers, availability of innovative and entrepreneurial opportunities, and construction demands related to finance, labor, material, transport, utilities, firm factors such as, size, ability to assess market signals and opportunities, level of international experience, long-term and strong management strategic orientations/objectives, superior management & organizational dynamic capabilities, financing capacity, competencies in project management, specialist expertise and technology, resources based on level of knowledge and research & development, risk management attitude, quality management of product, service, human resource, profit targets (return on investment/sales/assets), level of knowledge and international experience, uncertainty avoidance, international business network for example relationship with foreign partners, product differentiation with strong brand name, reputation and good track record /competitive advantage, and project factors such as, project size, project types (building, manufacturing), technical complexity of projects, type of clients (public, private), availability of funds for projects, contract types /procurement methods: lump sum, cost-plus, D&B, experience in similar works, existence of strict time and quality requirements, and availability of partner/alliance.

The proposed ELET decision model will be developed by identifying the common shared factors significantly influencing both EL and ET factors using mutually inclusive principle as shown in Figure 1.

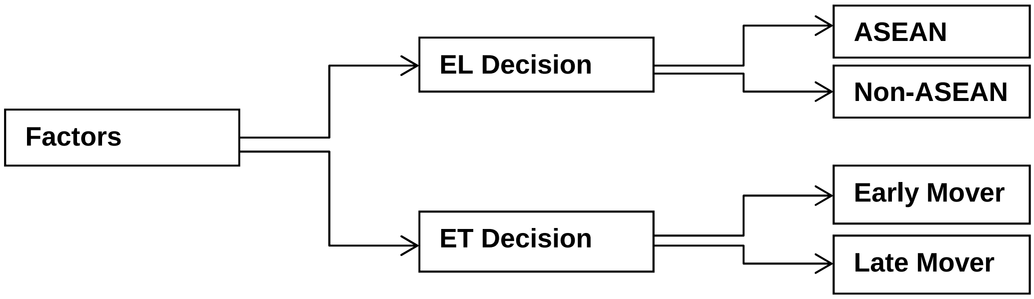

Figure 1 Conceptual framework for EL and ET decision model (Developed for this study)

The proposed ELET decision model consists of two dependent variables which are the EL and ET decisions adopted by the firms. These are the variables of primary interest, the variances in which are attempted to be explained by the forty four factors as independent variables identified from the literature review.

Research Method

The study adopts an exploratory approach utilizing a quantitative method. This approach is a common strategy in business and management research and particularly suitable when the aim is to understand the "what" and "how" factors influencing the firms' EL and timing decisions (Saunders, Lewis & Thornhill 2009). The target population was chosen from the cross-section of Malaysian construction firms that had undertaken and completed projects in international markets. However, an official registry that contains the total number of construction firms in international markets is not available. Hence, the sampling frame of the population was based on CIDB (2103) record with 115 firms registered as international players operating in more than 49 countries. Their involvement in international projects includes various sectors such as building, infrastructure, branches of engineering, mechanical and electrical, power transmission and plant, and oil and gas. The unit of analysis is an individual construction firm. Thus, the target respondents from these firms were the general managers, senior managers, project managers, assistant project managers, project engineer, project planners, contract managers and project coordinators; those directly involved who have acquired international experience in handling construction projects in international markets.

This paper is part of on-going research based on a section of the survey questionnaire to seek the experts' opinion on their firms' EL and ET decisions. The purposes of the questionnaire are: (1) to determine individually the significant factors influencing EL and ET decisions and, (2) to determine the commonly shared or mutually inclusive significant factors that the respondents considered in their EL and ET decisions using factor analysis from each model. Hence, the respondents were asked to select their firms' (a) preferred ET (early mover/late mover) and (b) international business locations (a list of countries was given as recorded by CIDB Malaysia and respondents were encouraged to state other non-listed locations). The preceding question seeks the experts' opinions on the significant level of 44 factors on their EL and ET decisions. The level of significance of influence for each opinion was measured using a 5-point Likert scale (1: Not critical; 2: A little critical; 3: Critical; 4: Very critical; and 5: Extremely critical).

The purpose of each analysis, results and discussion on factors influencing the EL and ET decisions are outlined in the next section. The binary logistic regression analysis dependent (EL and ET decisions) was used while factor analysis was carried out to measure the independent variables (factors influencing the EL and ET decisions). Other statistical analysis techniques such as descriptive analysis validity test, reliability test, normality test, correlation were adopted.

Results and Discussions

Based on a total of 115 firms, 45 firms responded giving a 39.1 percent response rate. In order to increase the rate of response, personal distribution, follow-up letters and phone calls were carried out. Hence, the response rate for this study is acceptable since most of the surveys done in Malaysia generated a rate between 10 to 20 per cent for example, 10.8% from previous studies by Ahmed et al. (2002), 19.8% from Abdul Aziz, Wong and Awil (2008) and 12.1% by Abdul-Aziz and Awil (2010).

The respondents' designation indicates a diverse background is required during international operations. In general, the respondent's designation varied from being managing director (2), technical director (2), vice president (2), general manager (1), senior project manager (3), project manager (5), project/architecture coordinator (2), senior project engineer (1), project engineer (3), design/civilvengineer (9), contract manager (3), quality/financial/human resource manager (3), quantity surveyor (2), project planner(1) and other managerial positions (6). Results demonstrate that 25% of the respondents have more than 10 years of international experience, 29% having experience between 5 to 10 year and the rest (47%) have between 1 to 4 years of experience. Hence, the respondents have the required international related construction background to participate and give reliable opinions.

They were asked to choose their international business locations based on a list of 43 countries adopted from the CIDB record (2013) which are: Algeria, Australia, Bangladesh, Cambodia, China, Egypt, Hong Kong, India, Indonesia, Iran, Iraq, Ireland, Japan, Kuwait, Libya, Maldives, Mauritius, Myanmar, Mongolia, Morrocco, Nepal, Nigeria, Oman, Pakistan, Philiphines, Qatar, Saudi Arabia, Seychelles, Singapore, Spain, South Africa, South Korea, Sudan, Syria, Sri Lanka, Taiwan, Thailand, Turkmenistan, United Arab Emirates, United Kingdom, Vietnam and Yemen and were also encouraged to state other non listed locations.

The results indicate about 88% similarity in terms of countries recorded by CIDB and the countries penetrated by the firms from this study. However, eight (8) additional countries were found in this study namely; Austria, Botswana, Brunei, France, Germany, Tobago, United States of America and United Kingdom which were not in the CIDB list.

To ensure consistency and a proper comparison with the CIDB Malaysia (2013) report on the international business locations of Malaysian construction firms, this study also grouped the countries under ASEAN and non-ASEAN. This classification alllows the measure of the EL and ET decisions as binary variables as required by the logistic regression analysis. Using descriptive analysis, it was found that about 73% of firms (33 firms) have chosen the non-ASEAN while the other 27% (12 firms) have chosen the ASEAN. The findings in this study are supported by the CIDB Malaysia (2013) statistics where more than 65% of the construction firms have penetrated non-ASEAN.

Measurement of Independent Variables

Validity Tests

In order to determine the suitability of data using factor analysis, two main issues were validated, accordingly; (a) a sampling adequacy issue and (b) the strength of the correlations among the independent variables (factors) using Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy (MSA) and Bartlett's tests of Sphericity (Pallant 2011). William and Brown (2012) stated that KMO static varies between 0 and 1 and recommend accepting values greater than 0.5, which indicates that the sample meets the fundamental requirements for factor analysis. In addition, the Bartlett's test of Sphericity should be significant ($p < 0.05$) for factor analysis to be considered appropriate. Table 1 shows the values for KMO MSA and Bartlett's test of Sphericity for factors influencing the EL and ET decisions.

Table 1: KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity for EL and ET Decisions

Entry Decisions		**EL Decision**	**ET Decision**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.727	0.779
Bartlett's Test of Sphericity	Approx. Chi-Square	553.194	725.122
	Df	136	190
	Sig.	.000	.000

The results show that the KMO MSA values are 0.727 and 0.779 for EL and ET decisions, respectively; both are greater than 0.5 (Williams & Brown 2010). Further, the results for Bartlett's test of Sphericity have given χ^2 (136) = 553.194, $p < 0.001$, and χ^2 (190) = 725.122, $p < 0.001$, for EL and ET decisions, respectively which indicate that correlations between items were sufficiently large and strong for PAF.

Total Variance Explained

In this study, the data reduction process follows three criteria. First, Kaiser's criteria that only factors with eigenvalue greater than one are retained. Second, factors with just one item were excluded from the analysis and thirdly, the cumulative percent of variance extracted are presented. Table 2 and Table 3 show the results for the EL and ET decisions respectively, extracted from the PAF analysis.

The results from Table 2 for EL decision reveal the presence of five (5) components with eigenvalue exceeding 1. These five factor components explain a total of 71.032% of the variance contributed by component 1 (42.763%), component 2 (9.182%), component 3 (7.865%), component 4 (6.527%) and component 5 (4.695%).

Table 3 also reveals the presence of five components with eigenvalue exceeding 1 for ET decision. These five components explained a total of 72.186% of the variance contributed by component 1 (48.247%), component 2 (7.984%), component 3 (6.339%), component 4 (5.212%) and component 5 (4.404%).

Thus, results for the EL and ET decisions demonstrate a good cumulative percentage of variance of 71.032% and 72.186%, respectively; both are well above the common percentage of the explained variance for humanities research which is commonly in the range of 50% up to 60% (Hair et al. 1995).

Table 2: Total Variance Explained for EL Decision

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings [a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.556	44.449	44.449	7.270	42.763	42.763	5.561
2	1.838	10.810	55.260	1.561	9.182	51.945	3.152
3	1.609	9.464	64.724	1.337	7.865	59.810	3.504
4	1.357	7.981	72.705	1.110	6.527	66.337	3.129
5	1.090	6.414	79.119	0.798	4.695	71.032	2.728
6	0.773	4.549	83.668				
7	0.566	3.327	86.994				
8	0.496	2.916	89.910				
9	0.426	2.507	92.417				
10	0.318	1.871	94.288				
11	0.241	1.418	95.706				
12	0.201	1.183	96.889				
13	0.168	0.988	97.877				
14	0.133	0.785	98.662				
15	0.109	0.640	99.302				
16	0.070	0.410	99.712				
17	0.049	0.288	100.000				

Extraction Method: Principal Axis Factoring.
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Table 3: Total Variance Explained for ET Decision

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.920	49.599	49.599	9.649	48.247	48.247	4.744
2	1.842	9.212	58.811	1.597	7.984	56.231	4.506
3	1.523	7.615	66.427	1.268	6.339	62.571	4.830
4	1.327	6.634	73.061	1.042	5.212	67.782	5.733
5	1.166	5.828	78.889	0.881	4.404	72.186	5.883
6	0.738	3.690	82.578				
7	0.604	3.019	85.597				
8	0.529	2.645	88.243				
9	0.415	2.074	90.316				
10	0.340	1.699	92.016				
11	0.291	1.453	93.469				
12	0.268	1.340	94.809				
13	0.236	1.178	95.987				
14	0.193	0.965	96.952				
15	0.170	0.848	97.800				
16	0.141	0.707	98.508				
17	0.121	0.606	99.113				
18	0.088	0.438	99.552				
19	0.058	0.292	99.844				
20	0.031	0.156	100.000				

Extraction Method: Principal Axis Factoring.
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Factor Analysis: Principal Axis Factoring Analysis (PAF)

Factor analysis involves factor extraction and rotation methods. The extraction methods that are commonly used in the published literature for both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are the principal component analysis (PCA) and principal axis factoring (PAF) also known as factor analysis (FA)(Williams & Brown 2010).

Firstly, following the PCA analysis, PAF was conducted for comparison and assessment for best fit as suggested by William and Brown (2010). According to Williams and Brown (2010), PAF is more correct theoretically but more complicated than PCA. In other words, whichever rotated solution produces the best fit and factorial suitability, both intuitively and conceptually, should be used. The difference between these analyses lies on the communalities used where in PCA, the communalities are assumed to be 1, assuming that the total variance of the variables can be accounted for by means of its components and hence, there is no variance. However, in the PAF method, the initial communalities are not assumed to be 1, hence the variables do not account for the 100 percent of the variance. Since, the sample size in this study (45 respondents) is less than 100; communalities above 0.60 were sought.

The second step is factor rotation method, in which the interpretation and naming of factors or component are carried out by altering the pattern of the factor loadings. Instead of orthogonal, the oblique rotation with direct-oblimin was used in this study. Oblique rotations assume that the factors are correlated. Oblique rotation is the best method to use in factor rotation as it is also looks at the correlations among the factors. The results are presented in pattern matrix and used later in the interpretation of factors.

In this study, the PAF was empirically found to offer best fit and used in this study to analyze the responses to the forty four (44) factors used in the questionnaires. Table 4 and Table 5 show the results from the PAF used as the data reduction technique using direct-oblimin with Kaiser Normalization for EL and ET decisions respectively.

Table 4 reveals a five-factor solution which has resulted in 17 items with factor loadings above 0.50 with eigenvalues above Kaiser's criterion of 1, thus in combination explained 71.032% of variance. According to Williams and Brown (2012), for study that has sample size less than 100 the communalities values must be above 0.6. The results indicate that all seventeen (17) factors have values above 0.6 hence there is no violation of the assumption of communalities. The good communalities shown in the last column indicate that the factor analysis is suitable even though the sample size for this study is only 45 respondents (Williams & Brown 2010). The five components extracted were grouped as: (1) firm factor; (2) country factor; (3) market factor; (4) project factor; and (5) management factor.

Table 5 also reveals a five-factor solution which has resulted in 20 items with factor loadings above 0.50 with eigenvalues above Kaiser's criterion of 1, thus in combination explained 72.186 percent of variance. The results indicate that all 20 factors have values above 0.6 hence there is no violation of the assumption of communalities. The five components extracted were grouped as: (1) firm factors; (2) project factors; (3) performance factors; (4) management; and (5) market factors.

Reliability Test

Once the factors were obtained and interpreted, the tests for consistency and stability took place by conducting reliability test using Cronbach's alpha. It is a reliability coefficient to indicate the extent to which all item in a set are positively correlated to one another and is obtained by computing the average inter-correlation among all items. The closer Cronbach's alpha is to 1, the higher the internal consistency reliability. In general, reliability less than

0.60 is considered poor, a result of 0.70 is acceptable and above 0.80 is considered as good (Sekaran & Bougie 2013).

Results of the reliability test for EL decision in Table 4 demonstrates that the components extracted from this analysis show high reliability of internal consistency where the value for each component exceeds 0.70; Firm factors (α= 0.912); country factors (α= 0.792); market factors (α= 0.812); project factors (α= 0.819) and management factors (α= 0.791). Moreover, all items when combined indicate a very good overall internal consistency (α= 0.917). Results for ET decision in Table 5 show that the components extracted from factor analysis indicate high reliability of internal consistency where the value for each component exceeds 0.70; Firm factors (α= 0.873); Project factors (α= 0.823); Performance (α= 0.905); Management factors (α= 0.890) and Market factors (α= 0.862). In addition, all items when combined indicate a very good overall internal consistency (α= 0.945). Hence, the factors for EL and ET decisions have high reliability of internal consistency.

Table 4: Factor loadings using Principal Axis Factoring (PAF) for EL Decision

Component	***Factor Loading***					***Commu-nalities***
	1	**2**	**3**	**4**	**5**	
Firm Factors						
Strong competencies (project management, specialist expertise and technology)	0.823					0.812
Strong financing capacity	0.760					0.620
Strong resources : (Level of knowledge and Research & Development)	0.750					0.712
Experience of firm in similar works	0.667					0.715
Management quality (product, service, human resource)	0.611					0.621
Availability of funds for projects	0.595					0.777
International business network : Strong relationship with foreign partners in host countries	0.580					0.647
Country Factor						
Trade relationship between two countries		0.933				0.932
Diplomatic relationship between two countries		0.761				0.699
Financing support of home country banks		0.568				0.671
Market Factor						
Product/Service market growth			0.863			0.801
Market entry barriers			0.750			0.685
Project Factor						
Firm ability to assess market signals & opportunities				-0.786		0.687
Firm level of international experience				-0.686		0.755
Technical complexity of projects				-0.569		0.699
Management Factor						
Uncertainty avoidance					0.665	0.686
Long-term and strong management strategic orientation/objectives					0.620	0.756
Eigenvalues	7.556	1.838	1.609	1.357	1.090	
% of Variance	42.763	9.182	7.865	6.527	4.695	
Cumulative of Variance%	42.763	51.945	59.810	66.337	71.032	
Cronbach's Alpha (n)	0.912 (7)	0.792 (3)	0.812 (2)	0.819 (3)	0.791 (2)	
Overall items Cronbach's Alpha (n)	0.917 (17)					
Extraction Method: Principal Axis Factoring Rotation Method: Direct-Oblimin with Kaiser Normalization						

Table 5 Factor loadings using Principal Axis Factoring (PAF) for ET Decision

Component	***Factor Loadings***					***Commu-nalities***
	1	2	3	4	5	
Firm Factors						
Firm's international experience	0.795					0.686
Firm's resources: Level of knowledge and Research & Development	0.622					0.768
Firm's competencies: Project management, specialist expertise &technology	0.592					0.703
Firm's financing capacity	0.515					0.749
Project Factors						
Performance: Increase level of knowledge and international experience		0.783				0.775
Availability of funds for projects		0.588				0.731
Technical complexity of projects		0.505				0.742
Performance factors						
Project size			-0.859			0.855
Good track record and competitive advantage			-0.806			0.844
Type of clients: public, private			-0.544			0.845
Firm's reputation			-0.505			0.682
Management factors						
Financing support of home country banks				-0.796		0.704
Experience of firm in similar works				-0.746		0.840
Existence of strict time limitations				-0.706		0.821
Superior management and organizational capabilities				-0.548		0.715
Market Factors						
Construction demand: Finance, labor, material, transport and other utilities					0.805	0.748
Availability of partner/alliance					0.625	0.677
Attitude and intervention of host governments					0.598	0.666
Similarity of host country/market: social, cultural, religions					0.575	0.513
Firm's ability to assess market signals and opportunities					0.558	0.624
Eigenvalues	9.920	1.842	1.523	1.327	1.166	
% of Variance	48.247	7.984	6.339	5.212	4.404	
Cumulative of Variance %	48.247	56.231	62.571	67.782	72.186	
Cronbach's Alpha (n)	0.873 (4)	0.823 (3)	0.905 (4)	0.890 (4)	0.862 (5)	
Overall items Cronbach's Alpha (n)	0.945 (20)					
Extraction Method: Principal Axis Factoring Rotation Method: Direct Oblimin with Kaiser Normalization						

Normality Test

A univariate analysis known as Skewness and Kurtosis was used to determine whether the data is normally distributed or not. The distribution is considered normal if the value lies between -1 and +1. In addition, the normal quantile-quantile (Q-Q) plot method was also used. If the majority of values (smaller dots) lie on the straight line in the plot, the data are approximately normally distributed. In order to meet the assumption of normality, the Skewness and Kurtosis statistics was performed on the factors for the EL and ET decisions.

For the EL decision factors, the results revealed the followings; Firm factors (Skewness = -0.809; Kurtosis = 0.298), country factors (Skewness = -0.192; Kurtosis = -0.745), market factors (Skewness = -0.772; Kurtosis = 0.4770, project factors (Skewness = -0.698; Kurtosis = 0.030), and for management factors (Skewness = -0.046; Kurtosis = -0.680). While for the ET decision factors, the results are as follows; the firm factors (Skewness = -0.360; Kurtosis = -0.461), project factors (Skewness = -0.001; Kurtosis = -1.092), performance factors (Skewness=-0.524; Kurtosis= -0.659), management factors (Skewness = -0.115; Kurtosis = -0.431) and market factors (Skewness = -0.365; Kurtosis = -0.223).

The descriptive statistics shows that all variables are normally distributed since the values of Skewness and Kurtosis coefficients are in the range of ±1.0 with majority of values lying on the straight line in the Q-Q plots. Hence, all factors influencing the EL and ET decisions are considered approximately normally distributed.

Omnibus Tests of Model Coefficient

The omnibus test indicates an overall significant of the influential factors on the EL and ET decisions. For EL decision, the result shows that the Omnibus test of Model Coefficients is significant; [χ^2 (5) = 22.207, $p < 0.001$]. While for the ET decision, the result reveals that the Omnibus test of Model Coefficients is also significant; [χ^2 (5) = 21.792, $p < 0.05$]. Therefore, the models have a good set of independent variables for both EL and ET decision factors.

Model Summary Using Cox and Snell R^2 and Nagelkerke R^2

The Cox and Snell R^2 and Nagelkerke R^2 are statistics that provide an indication and quantify the 2R proportion of explained “variation” in the logistic regression model. Precisely, for the EL decision, the value of Cox and Snell R^2 is 0.418 which reveals about 41.8% of the variation in the outcome variable is explained by the model. Likewise, the Nagelkerke R^2 is 0.642 which indicates that about 64.2% of the variation in the outcome variable is explained by the logistic regression model. Similarly, for the ET decision, the Cox and Snell R^2, and Nagelkerke R^2 suggest that between 43.6% and 59.6% of the variability is explained by the logistic regression model.

Goodness-of-Fit of the Model using Hosmer and Lemeshow Test

Using Hosmer-Lemeshow Goodness of Fit Test, a good fit is indicated by a significant value more than 0.05. For the EL decision, results indicate that the data supports the model with $\chi2$ (8) = 5.734 with a significance level of 0.263 ($p > 0.05$). While for the ET decision, the results also indicate that the data supports the model with $\chi2$ (7) = 8.857 with a significance level of 0.263 ($p > 0.05$). Thus, both results for the EL and ET decisions indicate sufficient evidence to claim that the model is worthwhile and fits the data adequately.

Assumptions of Logistic Regression Model (LRM)

Prior to performing the logistic regression analysis, a correlation statistics and outlier diagnosis were prepared to investigate possible signs of multi-collinearity and the presence of outliers. The following sections discuss on the multi-collinearity and outliers assumptions that have to be met in order to have a valid model.

Multi-collinearity Diagnosis for Factors influencing EL and ET Decisions

Multi-collinearity problems exist when there are strong relationships among independent variables. The variance inflation factor (VIF) is calculated for all variables with the aim of verifying the possible existence of multi-collinearity. This test measures the extent to which the variances of the coefficients estimated in a regression are inflated when compared to the cases in which the independent variables are not linearly related. When the VIF values are greater than 10, the cut-off point can become indicators of the existence of multi-collinearity (Pallant 2011).

Table 6: Coefficients [a] and collinearity statistics for EL Decision

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Step 1	(Constant)	11.643	12.249		.951	.348		
	Firm	.050	3.500	.003	.014	.989	.507	1.971
	Country	-1.555	2.699	-.103	-.576	.568	.754	1.326
	Market	-3.798	2.668	-.257	-1.424	.163	.737	1.357
	Project	3.946	3.141	.247	1.256	.217	.617	1.620
	Management	4.274	3.465	.254	1.233	.226	.565	1.769
a. Dependent Variable: series								

Table 6 and Table 7 depict the coefficients and linear statistics which explain whether there is existence of multi-collinearity for EL and ET decisions respectively. The results show the highest VIF values of 1.971 and 2.427 respectively, which are well below 10, the cut-off point recommended by Pallant (2011). Furthermore, all tolerance values for both tables are greater than 0.1 which rules out the presence of multi-collinearity in the data. Hence, multi-collinearity problems do not exist for either EL or ET decision factor models.

Table 7: Coefficientsa and collinearity statistics for ET Decision

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Step 1	(Constant)	12.019	15.687		.766	0.449		
	Firm	-7.754	3.818	-.428	-2.031	0.051	0.583	1.716
	Project	3.811	5.045	.190	.755	0.455	0.412	2.427
	Performance	2.536	3.727	.154	.680	0.501	0.508	1.967
	Management	7.087	5.465	.319	1.297	0.204	0.428	2.335
	Market	-2.954	4.517	-.142	-.654	0.518	0.552	1.813
a. Dependent Variable: series								

The Presence of Outliers

Preliminary analyses were performed to ensure no violation on the assumptions of normality and outlier cases. For the EL decision, the analysis detected 1 outlier which can harm the logistic regression analysis and correlation analysis results for a small sample size. The outlier was removed leaving only 44 out of 45 items. For the ET decision, the analysis detected 7 outliers. Similarly, the outliers were removed leaving only 38 out of 45 items. Consequently, the results depicted by the Box-plots indicate no outlier for the entire variables which shows the data set is clean from any outlier cases. The output in the logistic regression tables also shows that the case wise plot was not produced due to the absence of outliers. Since these two assumptions were met, both logistic regression models for EL and ET decisions together with their results are valid. In summary, the findings have proven that the multi-collinearity problems did not exist in either EL or ET decisions models and are supported by all VIF values (less than 10.00) with tolerance values, all above 0.10.

Measurement of Dependent Variable

The objective of this study is to examine the influence of factors on firms' EL decisions in choosing either ASEAN or non-ASEAN countries and on the firms' ET decisions to be either an early or late mover. Descriptive analysis shows that more than 70% of the firms have penetrated the non-ASEAN with more than 50% of the firms choosing to be late movers. Thus, in order to have a better understanding of the factors influencing these decisions, a binary logistic regression analysis was carried out. As a limitation to this study, the actual distance from Malaysia to the foreign locations was not considered. However, the actual distance from host to home country is proposed as an observable measurement for future research on EL decision to develop a decision tool for construction firms.

A binary logistic regression is similar to a linear regression except that it is used when the dependent variable is dichotomous/binary, while multinomial logistic regression is used when the dependent or outcome variable has more than two categories (Leech, Barrett, & Morgan 2005). It is used as an appropriate multivariate procedure for describing and testing relationships between a dichotomous/binary (0/1) outcome variable and a number of categorical and/or continuous variables. Hence, a binary logistic regression model was used in this study to determine the effect an increment of each independent variable (factors) on how likely the binary variable (EL) decision is to take value 1 (non-ASEAN countries) as opposed to value 0 (ASEAN countries). Similarly, a binary logistic regression model was also used to determine the effect an increment of each independent variable (factors) on how likely the binary variable (ET) decision is to take value 1 (late movers) as opposed to value 0 (early mover). An assessment of the goodness-of-fit of the model using Hosmer and Lemeshow test carried out earlier has determined the appropriateness of the model.

Table 8 and Table 9 known as the classification tables summarize the results with the predictor variables in the EL and ET decision models respectively. Table 8 shows that the EL decision model has correctly classified 90.6% of construction firms have chosen the non-ASEAN countries, while 55.6% have chosen the ASEAN countries. As a result, in the overall model, 82.9% of the sample population has been correctly classified.

Table 8: Classification Table with predictor variables for EL Decision[a]

Observed			Predicted		
			EL		Percentage
			Non-ASEAN	ASEAN	Correct
Step 1	EL	Non-ASEAN	29	3	90.6
		ASEAN	4	5	55.6
	Overall Percentage				82.9
a. The cut value is .500					

Similarly, as shown in Table 9, 95.8% of the construction firms were correctly classified in the late mover group, while 78.65% in the early mover group. As a result, in the overall model, 89.5% of the sample population has been correctly classified. Hence, both classification tables have indicated that each model has predicted the correct category for each case well.

Table 9: Classification table with predictor variables for ET Decision[a]

Observed			Predicted		
			ET		Percentage Correct
			Early Mover	Late Mover	
Step 1	ET	Early Mover	11	3	78.6
		Late Mover	1	23	95.8
	Overall Percentage				89.5
a. The cut value is .500					

Variables in the Equation for EL Decision

The binary logistic regression was also performed to assess the impact of a number of factors on the likelihood of the firms' EL decision in international market. Table 10 known as "variables in the equation" provides the information on the contribution or importance of each independent variable (factors for EL decision) on the model. The Wald statistics (fourth column) was also used to identify the independent variables that are good predictors. This method of assessing the successive accuracy of a model is to evaluate its ability to correctly predict the category for cases for which the outcome is known.

Table 10 shows a model contains five independent variables named as the firm, country, market, project and management factors. The factors corresponding to the values under the sixth column labeled Sig. which are less than 0.05 are the variables that contribute significantly to the predictive ability of the model. This suggests that the model was able to distinguish between firms that chose to enter the ASEAN or Non-ASEAN countries. However, the model shows only three (3) predictors namely; firm, country and market were statistically significant, as shown earlier, where $\chi 2(5) = 22.207$, $p < 0.001$, with B values of -3.177, -4.780 and 4.150 respectively. Hence, for the firms to choose either to enter the ASEAN or non-ASEAN countries depends, among other factors, on the firm, country and market factors that are needed to be established before stepping into the chosen foreign market. While, the other two factors namely project and management with Sig. values of 0.073 and 0.224 did not influence the EL decision of the firms in international market expansion.

Table 10: Variables in the Equation for EL Decision

Factors		B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Firm	-3.177	1.554	4.181	1	.041	0.042	.002	.877
	Country	-4.780	2.136	5.007	1	.025	0.008	.000	.552
	Market	4.150	1.920	4.672	1	.031	63.404	1.472	2730.816
	Project	-2.550	1.422	3.214	1	.073	0.078	.005	1.269
	Management	1.725	1.418	1.479	1	.224	5.611	.348	90.368
	Constant	14.238	6.981	4.159	1	.041	1525167.612		
a. Variable(s) entered on step 1: firm, country, market, project, management.									

The other useful information in Table 10 is provided in the Exp (B) (seventh column). The B values provided in the second column are the values that are used in an equation to calculate the probability of a case falling into a specific category (independent variables influencing EL decision). These values are the odds ratios (OR) for each of the independent variables. The odds ratio represents 'the change in odds of being in one of the categories of outcome when the value of a predictor increases by one unit. It is shown as the strongest predictor. Since each predictor is a continuous variable, "increase" is reported for value more than 1 (decrease if less than 1) of the odds for each unit increase in the predictor variable. Hence, based on the overall results, the strongest predictor is the country factor (B = -4.780, p < 0.05), recording an odds ratio of 0.008. The odds ratio for this variable, however, as .008, is a value less than 1. This indicates that a firm with less knowledge on the country factors is 1 times less likely to choose the ASEAN countries as compared to those who have more knowledge on the country factors, all other factors being equal.

Variables in the Equation for ET Decision

Similarly, Table 11 provides information about the contribution or importance of each of the independent variables (factors) on the model for the ET decision. The factors corresponding to the values under column labeled Sig. which are less than 0.05 are the variables that contribute significantly to the predictive ability of the model.

Table 11: Variables in the Equation for ET Decision

Factors		B	S.E.	Wald	df	Sig.	Exp (B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Firm	-4.660	2.024	5.300	1	0.021	0.009	0.000	0.500
	Project	3.501	1.760	3.959	1	0.047	33.155	1.054	1.043E3
	Performance	1.669	1.342	1.546	1	0.214	5.304	0.382	73.624
	Management	-4.035	1.995	4.090	1	0.043	0.018	0.000	0.883
	Market	3.786	1.769	4.578	1	0.032	44.064	1.374	1.413E3
	Constant	1.014	3.436	0.087	1	0.768	2.756		

a. Variable(s) entered on step 1: firm, project, performance, management and market

Choosing either to enter early or late depends, among other factors, on the firms' background and resources to be established before stepping into the chosen foreign market. Hence, the logistic regression model fitted well with the predictor variables (ET decision) under components namely; firm, project, performance, management and market factors. In this case, the model reveals that four out of five independent variables which are the firm, project, management and market factors with Sig. values of 0.021, 0.047, 0.043 and 0.032 respectively, have made a unique statistically significant contribution to the model. However, another factor, performance (Sig. = 0.214) did not influence the ET decision. While the B value provided in the second column are the values that are used in an equation to calculate the probability of a case falling into a specific category (an independent variable that influences the ET decision).

Similarly for the ET decision based on Table 11 (Exp (B) column) the strongest predictor is the firm factor (B = -4.660, p < 0.05), recording an odds ratio of 0.009. The odds ratio for this variable, however, as .009, is a value less than 1. This indicates that the more knowledge a firm has on the firm factors, the less likely the firm chooses to be the late mover. Hence, the odds of a firm choosing to be a late mover decrease by a factor of 0.009, all other factors being equal.

Proposed ELET decision model

Common factors influencing both EL and ET decisions are consolidated towards developing the ELET decision model based on extracted loadings from factor analysis. Due to the limitation of using logistic regression analysis in the SPSS software, the analysis has to be carried out individually for both EL and ET decision models. Hence, the ELET decision model is developed by consolidating the common factors shared by both EL and ET decisions. The integration of decision using structural equation modelling that can model the constructs/factors influencing the two dependent variables simultaneously, is in progress.

The logistic regression models have successfully determined the effect of factors on EL and ET decisions in which 90.6% of the respondents have been correctly classified under non-ASEAN while 78.5% of the respondents have been correctly classified as late movers. Factor analysis has resulted in 17 significant factors for the EL decision and 20 significant factors for the ET decision. Table 12 shows the significant factor loadings for EL and ET decisions extracted from Tables 4 and 5.

Table 12: Summary of significant factors influencing EL and ET decisions based on factor loadings

	Factors influencing EL and ET decisions	Loadings for EL	Loadings for ET
C1	Host government attitude and intervention		0.595
C2	Similarity with host country/market (social/cultural/religious) environment		0.575
C8	Financial support from home country banks	0.568	0.796
C9	Trade relationship between two countries	0.933	
C10	Diplomatic relationship between two countries	0.761	
M3	Product/service market growth	0.863	
M4	Market entry barriers	0.750	
M6	Construction demand (e.g. finance, labor, material, transport and other utilities)		0.805
F2	Firm’s ability to assess market signals and opportunities	-0.786	0.558
F3	Firm’s level of international experience	-0.686	0.795
F4	Firm’s long-term and strong management strategic orientation/objectives	0.620	
F5	Firm’s superior management & organizational dynamic capabilities		0.548
F6	Firm’s financing capacity	0.760	0.515
F7	Firm’s competencies (project management, specialist expertise and technology)	0.823	0.592
F8	Firm’s resources (level of knowledge and Research & Development)	0.750	0.622
F10	Firm’s management of quality (product, service, human resource)	0.611	
F12	Firm’s perfomance in terms of increase level of knowledge and international experience		0.783
F13	Uncertainty avoidance	0.665	
F14	International business network (strong relations with foreign partners)	0.580	
F16	Firm’s reputation		0.505
F17	Firm’s good track record /competitive advantage		0.806
P1	Project size		0.859
P3	Technical complexity of projects	-0.569	0.505
P4	Type of client (public vs. private)		0.544
P5	Availability of funds for projects	0.595	0.588
P7	Experience of company in similar works	0.667	0.746
P8	Existence of strict time limitations		0.706
P10	Availability of partner/alliance		0.625
	Total number of factors	17	20

Further consolidation has resulted in nine (9) factors that are commonly shared or mutually inclusive for both EL and ET decisions as shown in Table 13. These factors were found to significantly influence the majority of firms' ET decision as late movers by entering the selected market locations mostly in the non-ASEAN countries far from their home country as shown in the ELET model in Figure 2.

Table 13: Mutually inclusive significant factors influencing ELET decisions of firms in international market expansion

No.	Factors influencing ELET decisions
1	Financial support from home country banks
2	Firm's ability to assess market signals and opportunities
3	Firm's level of international experience
4	Firm's financing capacity
5	Firm's competencies (project management, specialist expertise & technology)
6	Firm's resources (level of knowledge and Research & Development)
7	Technical complexity of projects
8	Availability of funds for projects
9	Firm's experience in similar works/projects

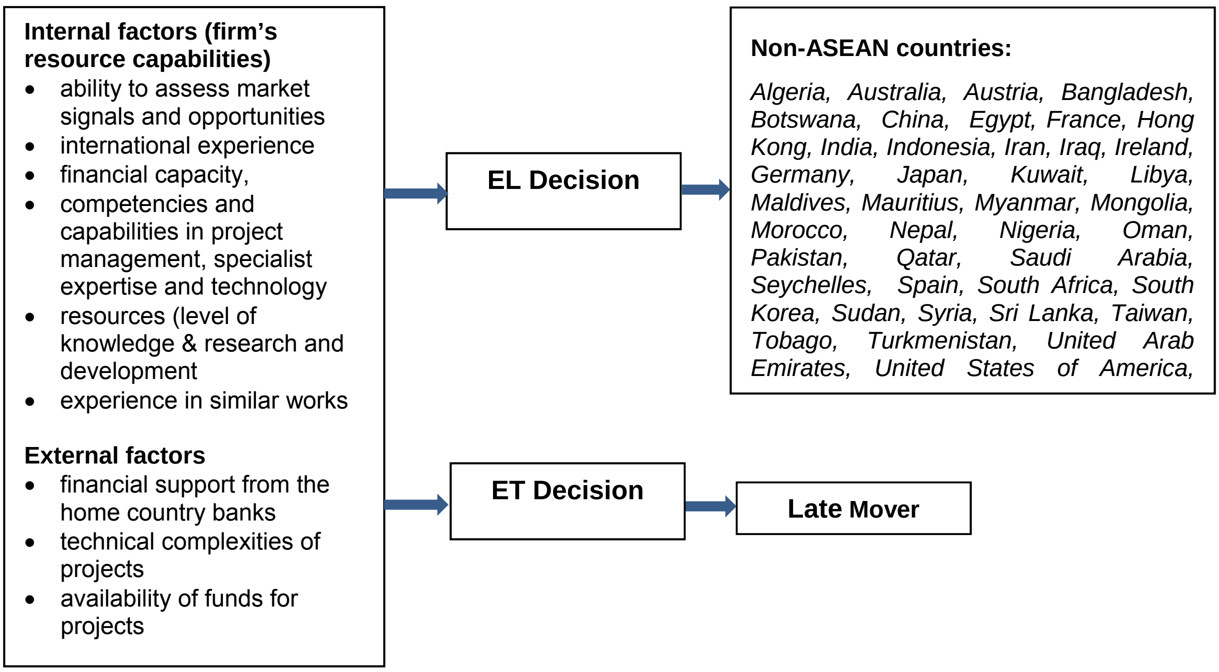

Figure 2: ELET decision model for Malaysian construction firms in international market (Developed from this study)

These nine (9) factors are further grouped into six (6) internal factors related to the firms' resource capabilities and three (3) external factors which contributed to their entry decisions. The factors related to the firms' resource capabilities were the firms' ability to assess market signals and opportunities, international experience, financial capacity, competencies and capabilities in project management, specialist expertise and technology, resources (level of knowledge & research and development) and experience in similar works, while the external factors are the financial support from the home country banks, technical complexities of projects and availability of funds for projects.

The ability of a firm to assess the emerging market growth and sourcing opportunities was crucial and should not be overlooked, as agreed by Sakarya, Eckman and Hyllegard (2007). Firms should not rely purely on macroeconomic and political factors. Gaston-Breton and Martín (2011) have recommended that firms should look for market signals such as the market size and its potentials in order to select the right location for their businesses. Hence, the findings have fulfilled the suggestion that the significant firm's resource based capabilities which have influenced the firms' ELET decisions to enter international markets, include the ability to assess market signal, financial capacity, competencies and capabilities in project management, specialist expertise and experience in similar works with no significant factor related to the political factor. According to previous studies, many business opportunities exist for construction firms to operate in the international market due to its high volume of construction demand and its growing economy either within the ASEAN or non-ASEAN regions. Hence, in a firm's strategic planning it is very important to assess the market signals and explore opportunities by gathering the required information on ELET decisions in potential international markets.

As indicated by Gunhan and Arditi (2005), financial strength is one of the essential firm resources in international construction. Capital requirement during market entry is very high and firms with large resources are able to cover the capital requirement and enter the foreign market earlier. However, these findings from this study are in line with Söderblom (2011) who pointed out that firms with strong financing capability or that have easier access to financing were able to enter the foreign market early.

International construction projects are known to be more complex with many known and unknown risk factors as compared to domestic projects. Hence, project management skills including specialist expertise and technological capabilities are very much needed to handle the complex nature of international projects (Gunhan & Arditi 2005). Thus, firms with a high level of competencies were among the early movers entering into a foreign market, since its competitive advantages will offset uncertainty and information disadvantages which are most profound for international entrants (Villaverde & Ortega 2007). Firms' capabilities, measured by the firm size, project management skills, specialist expertise level, firm reputation, technology knowledge and firm network, are some of the factors that influence the ET decision. Hence, when firms have low levels of competencies and capability, the implication is late entry (Dacko 2002).

The findings show that the firms' resources related to their level of knowledge based on Research and Development has significantly influenced their ELET decisions, which may indicate that low level of knowledge has resulted in lack of power to gain access to suppliers, markets, customers and other assets as accentuated by Soderblom (2011). However, Soderblom emphasized that learning creates substantial entry barriers for the late movers as compared to the early movers especially in unstable situations related to customer needs, where the early movers grasp opportunities that exist when entering the market that later will limit market opportunities for late movers. Guler and Guillén (2009) deliberated that the level of knowledge and technology increases as the firm's international experience increases. Hence, firms should plan properly to increase their knowledge and overcome the entry barriers in order to understand the needs of customer and predict the market trends (Kerin, Varadarajan & Robert 1992). Hence, late movers must acquire greater knowledge and other intangible assets to help reduce the risks and competition during the exploitation of opportunities in international markets. The factors affecting the firm's resources availability include satisfying capital requirement, lowering risk, more flexibility in decision making and increasing market power.

The findings indicate that firms' international experience significantly influenced the firms' ELET decisions to enter international markets. This finding is consistently supported by another study where firms with a high level of experience in similar projects have entered early compared to those having less experience (Schwens & Kabst 2009). As found by Guler and Guillén (2009), as firms gained more international experience they were more likely to overcome the entry barriers by entering as an early mover and to prepare for cross-border by improving their knowledge and experience (Liu, Low & Niu 2011). The findings suggest that the Malaysian firms' resource capabilities such as experience in similar projects plays important roles related to the ELET decisions. Hence, the construction firms contended that based on their firm's international experience in similar projects, they have chosen to be late entrants to the non-ASEAN countries.

Conclusions

In light of the work presented in this paper a number of conclusions can be made. As the Malaysian construction firms go international, the EL and timing decisions are perceived as very important strategies to fulfill the firms' missions and long-term objectives for their global operations. Before expanding internationally, the firms need to decide on suitable market EL and ET business' strategies. Both entry decisions were found to be contingent upon qualities of the firms' resource based capabilities. The findings revealed resource-based factors such as a firm's financial capacities, human capabilities, competencies and specialist expertise, knowledge and experience complemented by some external factors such as the financial supports from banks, are crucial in order to enter international markets.

The decision to enter a foreign market and concurrently choose the right time is a complex decision making process for construction firms. Malaysian construction firms contended that they have chosen to be the late entrants to enter the non-ASEAN countries based on the level of a firm's resource capabilities. This present study builds on and extends the literature on EL and ET decisions in a more integrated way and brings forward the significant mutually inclusive factors influencing both the EL and ET dimensions toward developing an integrated ELET decision model.

If firms require new resources in order to enter foreign markets, entry modes via acquisition and joint venture may enable them to be the early movers. Therefore, a further research to add entry mode (EM) decision in the ELET model would seem to be needed in order to develop a complete and comprehensive decision model, namely ELETEM model for international markets entry. It is recommended that a complex analysis such as structural equation modeling that can model constructs (factors) influencing two or more dependent variables simultaneously should be adopted to integrate these ELETEM decisions.

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