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# Factors Affecting Readiness of Thai Contractor in Approaching ASEAN Economic Community (AEC)

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**Abstract**

According to the official establishment of the ASEAN Economic Community (AEC), there will be a free movement of products, services, investment, finance and skilled labor. Construction and related engineering services are one of the important services under the General Agreement on Trade in Services which creates both opportunities and threats to Thai contractors. Therefore, Thai contractors should examine their readiness in order to compete in the free trade market. This study aims to identify factors affecting the readiness of Thai contractors in approaching AEC. Thai contractor's factors in this study merely focus on the corporate or company level which can be classified into internal factors and external factors. Internal factors were divided into strategic factors, corporate factors, management factors, psychological factors and technical factors whereas external factors were divided into laws and regulations, AEC agreement and socio-economic issues. A research survey was conducted with a structured questionnaire. The target group was 237 contractors whose experience was in both local and ASEAN construction markets. Sample size was allocated by Taro Yamane theory of 95% reliability and the number of samples was 149. The collected data was analyzed by using descriptive and inferential statistics. Findings indicated that the relationship between internal and external factors was positive and was in the same direction. Internal factors affect Thai contractors' readiness more than external factors. The internal affecting factors of Thai contractors' readiness were technical factors, corporate factors, strategic factors, management factors, and psychological factors respectively. Meanwhile external affecting factors were socio-economic factors, laws and regulations, and AEC agreement respectively. Focused on the level of affecting factors, the highest was the technical factors which comprised research and development (R&D), information technology (IT) and construction technology. Those affecting factors were mostly located at the organizational level. Therefore, strategic policy and planning should be initiated for those Thai contractors who need to play their roles in the ASEAN construction market.


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*Keywords: ASEAN Economic Community (AEC); Affecting Factors; Readiness; Thai Contractors*

## 1. Introduction

The Association of Southeast Asian Nations or ASEAN comprises 10 member countries, namely Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. The official establishment of ASEAN countries is aimed at economic, social and cultural cooperation, to promote peace, security and cooperation between ASEAN and foreign countries. It also promotes economic prosperity and quality of life for the people. ASEAN is a group of countries which can develop together in the economic, political and social as like the European Union. The integration of the ASEAN community is a powerful force for global competition.

The establishment of the ASEAN Economic Community (AEC) in 2015 was a major milestone in the regional economic integration agenda of ASEAN, offering opportunities in the form of a huge market of US$2.6 trillion and over 622 million people. In 2014, AEC was collectively the third largest economy in Asia and the seventh largest in the world. [1] The AEC is a major pillar force driving economic cooperation in the ASEAN countries which will lead

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to a single market and a joint base for production. There will be free movement of products, services, investment, finance and skilled labor. Consumers will be able to choose among the variety of products and services and people can travel more conveniently and freely in the ASEAN countries. [2] There are no obstacles among the movement of goods and services. Therefore such liberalization will create both advantage and disadvantage to the investor or entrepreneur depending on the potential of each country.

In the negotiation of liberalization of services under the General Agreement on Trade in Services (GATS), there are 12 types of service sectors: 1) Business services 2) Communication services 3) Construction and related engineering services 4) Distribution services 5) Educational services 6) Environmental services 7) Financial services 8) Health related and social services 9) Tourism and travel related services 10) Recreation, cultural and sporting services 11) Transport services and 12) Other services not included elsewhere.

The construction industry is one of the twelve service sectors under the trade liberalization agreement. The implementing of the ASEAN Economic Community in 2015 is likely to impact on the Thai construction industry in both organizations and individuals. According to this circumstance, Thai contractors should be aware of the coming competition and should examine their readiness in order to compete in the free trade market. Therefore, this study aims to identify factors affecting the readiness of Thai contractors in approaching AEC.

## 2. Theoretical Concepts

### *2.1. Definition of readiness*

Readiness means state of preparedness of persons, systems, or organizations to meet a situation and carry out a planned sequence of actions. Readiness is based on thoroughness of the planning, adequacy and training of the personnel, and supply and reserve of support services or systems.[3] The business readiness for entering the international market was separated into 2 dimensions; company readiness and product readiness. The company's readiness was analyzed from the strengths and weaknesses associated with the ability of export and the level of internationalization of the organization. It was composed of six components i.e. competitiveness in the domestic market, driving force in foreign business, commitment of entrepreneurs and executives, standardization of product, knowledge and resource management skills, and experience and training.

Therefore, readiness in this study focused on company readiness which is defined as the state of preparedness of a qualified, motivated, and experienced organization that matures enough to manage human resources, budget, materials and technology, and management in order to enhance organization competitive for entering the ASEAN Economic Community.

### *2.2. Organizational factors of the contractors*

Construction work has unique characteristics unlike other industries. The performance of construction works indicate quality of work, working time and construction costs which derive from the capability of contractors. The more efficiency the contractors operate with and manage their organizational factors, the more profitability they receive from construction work. The construction firm is a market trader. It acts as a broker of opportunities for projects and as an intermediary acquiring materials, human resources, equipment and finance to undertake those projects. [4]

Factor is one of the elements contributing to a particular result or situation. [5] Hence, the contractors' organizational factor means the element that cause contractors to achieve their goals effectively in terms of quality, time and cost.

Factors affecting the competitiveness of the construction industry are divided into 3 levels, namely nation level, company level and project level. In company level, factors are divided into five main factors, namely, strategic factor, corporate factor, management factor, technical factor and psychological factor while each main factor also divided into sub factors. Strategic factors include 4 sub factors i.e. company policy, stakeholders, power and influence and marketing strategy. Corporate factors include 4 sub factors i.e. legal and regulations, organizational structure, organizational characteristics and government impact. Management factors include 4 sub factors i.e. economic stability, financial stability, management process and operation/management. Psychological factors include 4 sub factors i.e. cultural influence, human resources, motivation and communication. While technical factors include 4 sub factors i.e. technology, information, knowledge and facility and equipment. [6]

According to the literature review, Thai contractor's organizational factors in this study merely focus on the corporate or company level which are classified into internal factors and external factors. The internal factors is classified into 5 main factors namely strategic factors, corporate factors, management factors, psychological factors

and technical factors. Each main factors are also separated into sub factors and criteria respectively as shown in table 1.

Table 1. Thai contractor's internal factors.

| Main Factor | Sub Factor | Criteria |
|---|---|---|
| 1. Strategic Factor | 1.1 Organizational Policy | 1.1.1 Clear policy for entering AEC |
| | | 1.1.2 Clear objective and process of work |
| | | 1.1.3 Clearly define type of construction expertise |
| | 1.2 Cooperation Network | 1.2.1 Self-reliance organization |
| | | 1.2.2 Establish networking among construction stakeholder |
| | | 1.2.3 Management attitude of shareholder are in the same direction |
| | 1.3 Marketing Strategy | 1.3.1 Plan to expand overseas construction business |
| | | 1.3.2 High competitive among contractors and relates business |
| | | 1.3.3 Increasing number of construction project |
| 2. Corporate Factor | 2.1 Organizational Model | 2.1.1 Clear organizational structure and line of control |
| | | 2.1.2 Proper staff selection and recruitment system |
| | | 2.1.3 Standard payroll system |
| | 2.2 Rules and Regulations | 2.2.1 Clear rules and regulations for employee |
| | | 2.2.2 Have procedure and working instruction |
| | | 2.2.3 Have the accounting information system for decision making |
| | 2.3 Organizational Characteristics | 2.3.1 Have ability to manage organizational liquidity |
| | | 2.3.2 Satisfy with worker's productivity in every level |
| | | 2.3.3 Receive reputation and has ability to compete with foreign contractors |
| 3. Management Factor | 3.1 Management Process | 3.1.1 Efficiency planning process |
| | | 3.1.2 Efficiency organizing process |
| | | 3.1.3 Efficiency controlling and monitoring process |
| | 3.2 Project Delivery | 3.2.1 Efficiency coordinating process |
| | | 3.2.2 Efficiency project delivery process |
| | | 3.2.3 Customer satisfaction in construction work |
| | 3.3 Internal Operation | 3.3.1 Construction project complete with standard quality |
| | | 3.3.2 Construction project complete within contractual schedule |
| | | 3.3.3 Construction project complete within contractual budget |
| 4. Psychological Factor | 4.1 Organizational Culture | 4.1.1 Good welfare for staff and worker |
| | | 4.1.2 Good teamwork and cooperation |
| | | 4.1.3 Accident rate lower than previous year |
| | 4.2 Human Resources | 4.2.1 Effective teamwork |
| | | 4.2.2 Good attitude staff |
| | | 4.2.3 No strike of worker |
| | 4.3 Motivation | 4.3.1 Have regular promotion system |
| | | 4.3.2 Have bonus and reward system |
| | | 4.3.3 Have effective motivation for working |
| 5. Technical Factor | 5.1 Construction Technology | 5.1.1 Sufficient construction machine & equipment |
| | | 5.1.2 Construction equipment can be used in maximum capacity |
| | | 5.1.3 Plan to updating technology and equipment |

Table 1. (continued)

| Dimension | Main Factor | Sub Factor |
|---|---|---|
| | 5.2 Information Technology & Communication | 5.2.1 Implement IT in organization |
| | | 5.2.2 Information transfer not complicate and efficiency |
| | | 5.2.3 Efficiency information management and controlling |
| | 5.3 Research & Development | 5.3.1 Introducing innovation into organization |
| | | 5.3.2 Arrange training for human resources development |
| | | 5.3.3 Always have R & D in the organization |

External factor is separated into 3 main factors namely Thai laws and regulations, AEC agreement and socio-economic issues which are divided into criteria as shown in table 2.

Table 2. External factors of Thai contractors

| Main Factor | Criteria |
|---|---|
| 1. Thai laws and regulations | 1.1 Construction laws and regulations |
| | 1.2 Laws and regulations for foreign profession and investor |
| | 1.3 Government policy on construction business |
| 2. AEC agreement | 2.1 Investment profile compare to other ASEAN countries |
| | 2.2 Government preparation for entering ASEAN economic community |
| | 2.3 Terms and conditions for enhance competitiveness of Thai contractors |
| 3. Socio-economic Issues | 3.1 Economic situation |
| | 3.2 Social and culture |
| | 3.3 Political stability |

## 3. Research Methodology

This study is a survey research which was conducted with a structured questionnaire. The target group was 237 Thai contractors whose experience was in both local and ASEAN construction market. Sample size was allocated by Taro Yamane theory of 95% reliability and the number of samples was 149 contractors. The samples derived by using simple random sampling. The respondents of this study were 76 contractors or 51.01% of the total. After verifying the completeness of collected questionnaires, data was analyzed by using descriptive and inferential statistics.

The rating scale is used in the questionnaire to assess the extent to which the respondents rate their opinions from the highest to the lowest of the five levels of Likert scale. To analyze the respondent's opinion, questionnaires were interpreted by stratified calculation as follows;

4.51 - 5.00 means most agree
3.51 - 4.50 means high agree
2.51 - 3.50 means moderate
1.51 - 2.50 means low agree
1.00 - 1.50 means least agree

In order to test the relationship between variables i.e. internal factor and external factor, Pearson's Correlation Coefficient was used for statistically significant effects at 0.01 and 0.05. The correlation coefficient are as follows;

r is positive. both variables are related in the same direction.
r is negative. both variables are related in the opposite direction.
r = 0.00 - 0.20. very low relationship
r = 0.20 - 0.39. low relationship
r = 0.40 - 0.59. moderate relationship
r = 0.60 - 0.79. high relationship
r = 0.80 - 1.00. very high relationship

For hypothesis testing, multiple regression analysis was used to analyze the variables that predict the readiness of Thai contractor in approaching the ASEAN economic community.

## 4. Results and Discussion

The results of this study are presented to support the objectives and hypotheses of the study which is separated into 4 parts as follows:

### *4.1. Current state of Thai contractors' organizational factors*

From the analysis of the internal factors, the five main factors of the organization can be classified as shown in fig. 1. This study found that the overall current internal factors of Thai contractors was at a high level (mean = 3.93). Considering the main factors of internal factors, it was found that the management factor was the highest at the high level (mean = 4.12), the corporate factor was at the high level (mean = 4.01), the psychological factor was at high level (mean = 3.89), the technical factor was at high level (mean = 3.83), and the least was the strategic factor with a high level (mean = 3.80).

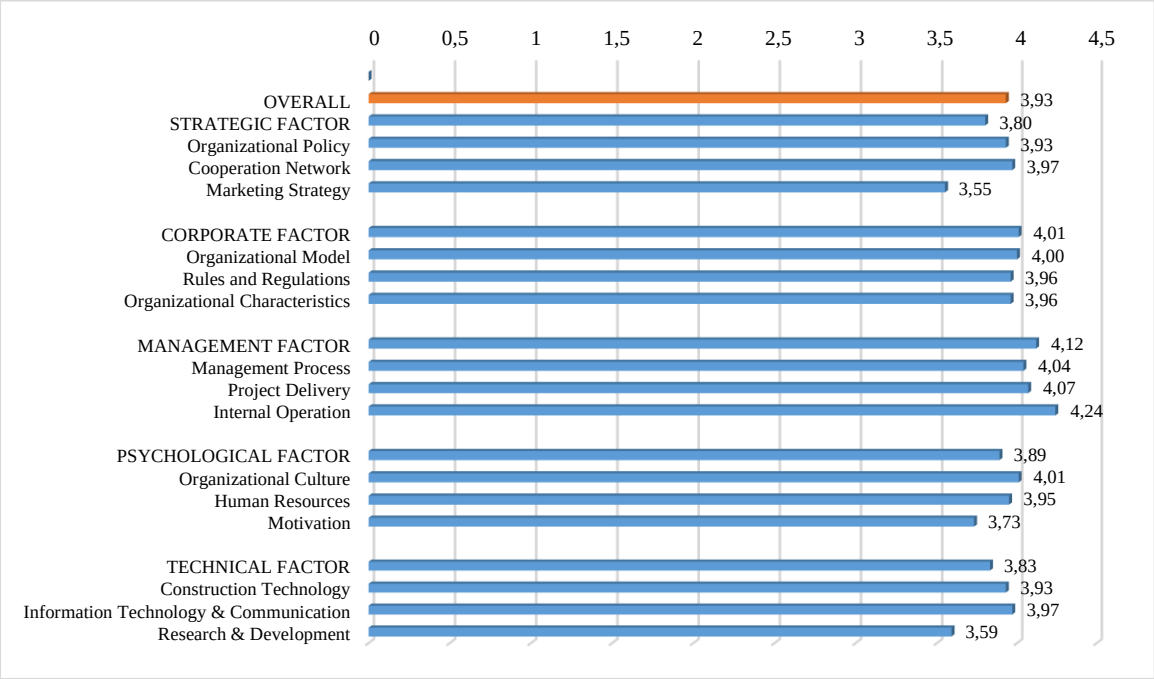


Fig. 1. Current state of Thai contractors' internal factors.

In analyzing the external factors of Thai contractors, this study found that the overall external factors of the contractor was at a moderate level (mean = 3.33). Considering the main factors of external aspects, it was found that Thai laws and regulations was the highest at moderate level (mean = 3.38), AEC agreement was at moderate level while the least was socio-economic issues with a moderate level (mean = 3.24) as shown in fig.2.

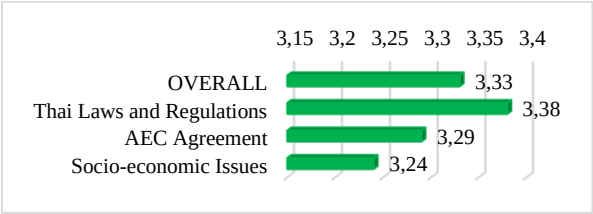


Fig. 2. Current state of Thai contractors' external factors.

*4.2. Organizational factors affecting the readiness of Thai contractors*

An analysis of organizational factors affecting the readiness of Thai contractors use a Pearson's product moment correlation to identify the relationship of two independent variables by testing of the hypotheses H1 and H2 as follows.

H1: Internal factors and external factors are correlated with the readiness of Thai contractors in approaching ASEAN economic community.

Table 3 Correlation coefficient between organizational factor and the readiness of Thai contractors. .

| Variables | Correlation coefficient (r) | *p* |
|---|---|---|
| Internal factors | 0.472** | .000 |
| External factors | 0.279* | .015 |

** 0.01 significant, * 0.05 significant

From table 3, analysis of the organizational factor and the readiness of Thai contractors found that the relationship between internal and external factors was a positive correlation (+). It is indicated that internal and external factors related in the same direction as the readiness. Internal factors affected organizational readiness more than external factors. Internal factors were correlated with the readiness of the Thai contractors at a moderate level (r = 0.472) with statistically significant at 0.01, while the external aspects were correlated with the readiness of the Thai contractors at low level (r = 0.279) with statistically significant at 0.05.

H2: Internal factors i.e. strategic factors, corporate factors, management factors, psychological factors and technical factors are correlated with the readiness of Thai contractors in approaching ASEAN economic community.

Table 4 Correlation coefficient between internal factors and the readiness of Thai contractors. .

| Variables | Correlation coefficient (r) | *p* |
|---|---|---|
| Internal factors | 0.472** | .000 |
| Strategic factors | 0.451** | .000 |
| Corporate factors | 0.462** | .000 |
| Management factors | 0.303** | .008 |
| Psychological factors | 0.280* | .014 |
| Technical factors | 0.523** | .000 |

** 0.01 significant, * 0.05 significant

From table 4, analysis of the main internal factors and the readiness of Thai contractors show that overall relationship of internal factors was a positive correlation (+). It indicated that the main factors related in the same direction. Considering five main factors, technical factors have most affected the contractors' readiness at moderate correlation (r = 0.523) with statistically significant at 0.01 while corporate factors affected the contractors' readiness at moderate correlation (r = 0.462), strategic factors affected the contractors' readiness at moderate correlation (r = 0.451), management factors affected the contractors' readiness at moderate correlation (r = 0.303) and psychological factors least affected the contractors' readiness at moderate correlation (r = 0.280).

Table 5 Correlation coefficient between sub factor of internal aspects and the readiness of Thai contractors. .

| Variables | Correlation coefficient (r) | *p* |
|---|---|---|
| Strategic factors | 0.451** | .000 |
| Organizational policy | 0.341** | .000 |
| Cooperation network | 0.097 | .403 |
| Marketing strategy | 0.469** | .000 |
| Corporate factors | 0.462** | .000 |
| Organizational model | 0.426** | .000 |

Table 5 (continued)

| Variables | Correlation coefficient (r) | *p* |
|---|---|---|
| Organizational model | 0.426** | .000 |
| Rules & regulation | 0.386** | .001 |
| Organizational characteristics | 0.422** | .000 |
| Management factors | 0.303** | .008 |
| Management process | 0.366** | .001 |
| Project delivery | 0.419** | .000 |
| Internal operation | 0.169 | .143 |
| Psychological factors | 0.280* | .014 |
| Organizational culture | 0.286* | .012 |
| Human resources | 0.398** | .000 |
| Motivation | 0.403** | .000 |
| Technical factors | 0.523** | .000 |
| Construction technology | 0.375** | .000 |
| IT & communication | 0.454** | .001 |
| Research & Development | 0.505** | .000 |

** 0.01 significant, * 0.05 significant

Table 5 shows the correlation coefficient between sub factors of internal factors and the readiness of Thai contractors. This study found that the most affecting factors of Thai contractors was research and development (r = 0.505), the second affecting factors of Thai contractors was marketing strategy (r = 0.469), the third affecting factors of Thai contractors was IT and communication (r = 0.454) whereas organizational culture was the least affecting factor of Thai contractors.

*4.3. Analysis of predicted factors of the Thai contractors' readiness*

After analysis of the correlation of internal and external factors, multiple regression analysis models were run to find out whether the five main internal factors can predict the readiness of Thai contractors in approaching AEC.

Table 6 Results of multiple regression analysis.

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig |
|---|---|---|---|---|---|
| | B | SE | Beta | | |
| (Constant) | -1.235 | .775 | | -1.593 | .116 |
| Strategic factors | .442 | .174 | .268 | 2.533 | .014 |
| Corporate factors | .189 | .256 | .133 | .739 | .463 |
| Management factors | -.267 | .234 | -.167 | -1.145 | .256 |
| Psychological factors | .210 | .214 | .145 | .984 | .328 |
| Technical factors | .480 | .233 | .320 | 2.058 | .043 |

($R^2$ = 0.362, F = 7.950, Sig. = .000) Dependent variables: Readiness of Thai contractors

Significant at $p < 0.05$ level

As can be seen in table 6, unstandardized coefficients of the technical factors and strategic factors had significant positive regression weights of 0.442 and 0.480 respectively. The multiple regression equation which explain the readiness of Thai contractors is as follows;

Readiness of Thai contractors = -1.235 + 0.442 Strategic factor + 0.480 Technical factor

According to the standardized coefficient, technical factors and strategic factors also had significant positive regression weights of 0.268 and 0.320 respectively. The multiple regression equation which explains the readiness of Thai contractors is as follows;

Readiness of Thai contractors = 0.268 Strategic factor + 0.320 Technical factor

The multiple regression equation of standardized coefficient explains that the strategic factors affect the readiness of Thai contractors in approaching AEC. While controlling for technical factor, if the strategic factor produces one-fold increase, the readiness of Thai contractors also increases by 0.268. In the meantime, after controlling for the strategic factor, if the technical factor produce one-fold increase, the readiness of Thai contractors also increases by 0.320.

### *4.4. Discussion and conclusion*

The aim of this study was to identify factors affecting the readiness of Thai contractors in approaching AEC. By analyzing the internal and external factors which affected the readiness of Thai contractors, it was revealed that internal factors affected Thai contractors' readiness more than external factors. The internal affecting factors of Thai contractors' readiness were technical factor, corporate factor, strategic factor, management factor, and psychological factors respectively. The technical factor was the highest affecting factor which comprised research and development (R&D), information technology (IT) and construction technology. Meanwhile external affecting factors were socio-economic factors, laws and regulations, and AEC agreement respectively.

Technical factors and strategic factors were the two predicted factors of Thai contractors' readiness, the more they increased their capability on technical and strategic factors, the higher level of competition they have. Therefore, strategic policy and planning should be initiated for those Thai contractors who need to play their roles in the ASEAN construction market.

## Acknowledgements

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