

INTERNATIONALIZATION STRATEGY OF ENGINEERING CONSULTING FIRM IN INDONESIA

CASE STUDY OF PT XYZ

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Abstract: *The price collapse of global oil price that started 2012 has hampered development of oil and gas industry and triggered a massive change of business process and total reduction of capital expenditure. Lack of new development plan slashed demand of engineering services automatically. This condition also affected domestic oil and gas condition in Indonesia and it's engineering service market. PT. XYZ as domestic market leader over the last five years suffered a significant reduction of its revenues. However global shifting of energy utilization to gas and recent recovery of oil price has shown a significant hope of price rebound that could restore to a better condition. A great deal of movement in development activity started in Papua New Guinea as well as Houston as the capital of world oil and gas industry. This open fresh opportunity for domestic company to internationalize its services to overseas market. This paper main objective are to formulate an internationalization strategy to enter Papua New Guinea and Houston market. Data is collected using questionnaire and in-depth interview for both internal and external subject, and analyzed using SWOT and QSPM matrix. Assessment of influencing factors recommended exporting, strategic alliance and joint venture as entry mode strategy to multiple markets.*

Keywords: *Internationalization, Strategy, Papua Nugini, Houston, SWOT, QSPM, entry mode*

I. BACKGROUND

Globalization which is an expanding process that connects various elements between countries is growing very fast nowadays. Trend of globalization has sparked the development of high inter-boundary activity around the world, giving rise to business opportunities that create an environment with highly competitive business competition.

Globalization eliminates regulatory, cultural and linguistic restrictions that have been a barrier to inter-state activity, and encourage the development of an era of free trade between countries. These is further supported by development of information technology which further facilitates the relationship between countries, and create new opportunities for every organization to conduct international cooperation across the country by maximizing competitive advantage.

Internationalization as an impact of globalization is a process by which companies move from domestic market to international markets (O'Farrell *et al.* 1996). Internationalization can also be seen as one of the indicators of corporate growth by expanding into international markets (Dunning and Lundan 2008).

Internalization is not only about opportunities (Carvalho and Lima 2010), it brings challenges as well (Ischenko 2011). Research by London (2010) identified four variables of internalization process starting with decision to internationalize, market selection, entry mode and factors influencing market entry mode.

PT XYZ is a market leader of Indonesia engineering consulting market in oil and gas industry. PT XYZ started its operations in 1973 and has grown from few engineers to hundreds of experts, from small firm to successful big-size enterprise operating in Indonesia market.

Table 1 Engineering Consulting Market Share (Indonesia) 2012 – 2016

Companies	Market Share (IDR)	Market Share (%)
PT XYZ	759,245,149,975	44.59
PT A	376,018,412,600	22.08
PT B	282,063,848,270	16.57
PT C	95,808,340,000	5.63
PT D	75,051,133,150	4.41
Others (7 Companies)	114,565,401,241	6.37
Total	1,702,752,285,236	100.00

The declines of oil prices into its lowest level US\$ 27 in the last five years slammed global oil and gas and its supporting industry. PT XYZ has been one of the victims of the rapid derivation of domestic engineering services demand. Domestic market decline 13.34% annually since 2012, resulting in a drastic fall of PT XYZ revenue of 68% from 2015 to 2016.

This unfavorable condition forced company to seek other markets outside Indonesia. According to trustworthy reports and findings, Papua New Guinea as one of the emerging markets and Houston as world capital of oil and gas industry show some hopeful progress of new opportunities. These locations selections are based on recommendation from several clients who have worked with PT. XYZ in domestic market.

The purpose of this research is to formulate an entry mode strategy for PT. XYZ to Papua New Guinea and Houston market by analyzing internal and external factors.

II. METHODOLOGY

This research focuses on PT XYZ having headquarters in Jakarta, Indonesia. Qualitative case study approach that examined internal and external factors was applied to obtain useful findings and understanding of company behavior. Research conducted by direct questionnaire and in-depth interview personally by author. Purposive sampling technique applied and interviews conducted with high ranking officials and decision maker within the company consist of Board of Directors member, Vice President of Marketing, Head of Business Development, External Relation Managers, Contract and Legal Manager. External opinions are also considered and interviews with representatives of related association and industry stakeholder was conducted to have balanced data and broader perspective.

Secondary data represent market condition of Houston and Papua New Guinea collected through literature study of journal, book, website and publication. Data analyzed using internal factor evaluation (IFE), external factor evaluation (EFE), SWOT matrix and QSPM (Quantitative Strategic Planning Matrix).

III. RESULTS

Market Analysis

Over the last five years engineering market in oil and gas industry in Houston and Papua New Guinea is growing rapidly. Engineering news record data (2017) show a market share of US\$ 4,500 million in Houston with annual growth rate almost 100%, contested by more than 30 multinational companies. Some of them are big names in the industry such as S&B Engineers and Constructors, Hatch Mott McDonald, Parsons Brinchkerhoff, Furgo, Atkins and many more. Over the past year Texas oil companies have hired more than 30,000 workers with total number of oil and gas workers reached more than 222,000 which equal to 16% rise in the same month last year (Eaton 2017).

Papua New Guinea market is even more appealing compare to Houston market. Total market of approximately US\$ 36,400 million year 2012 - 2016 is a sign of just how big and rapid oil and gas industry development in the country. The big market controlled by four major international players originally from US and Australia namely, GHD, SMEC, Kramer Ausenco and Wood Group. Expansion and commercialization of several gas reserves and field will increase both production and net exports double over 10-year forecast period and place Papua New Guinea as the third largest net exporter of LNG in the Asia-Pacific region (BMI research 2017). However instability of national political condition and high levels of corruption and crime can be a threat to investment and business activities.

Internal and External Factor Evaluation

Identification and analysis of internal and external factors is the first step to formulate a strategic plan. Internal factor identified strength and weakness factors of organization while external factors identified opportunities that can be exploited and threats that may occur. Internal and external factors obtained from observation and direct interviews with related respondent. Then, by involving respondent each strategic factors are weighted and rated with paired comparison method.

From internal factor analysis, engineering construction and project management capability found as major strength of the company (0.243) while lack of experience and inability to demonstrate capability to deliver full cycle of project development and limited international experience are the main weakness (0.099).

External factor analysis identified leveraging experience with international clients & partners to enter international market (0.162) is main opportunity that should be maximize by company, while direct competition from fellow Asian consulting firms (0.162) is major threat that need to proper response.

Table 2 Internal Factor Evaluation (IFE) Matrix

No	Internal Strategic Factors – Strength	Weight	Rating	Score
1	Engineering, construction and project management capability	0.243	3.00	0.730
2	Competitive price structure	0.108	3.25	0.351

3	Experience in engineering and EPC project with high international standard	0.081	3.75	0.304
4	Strong communication skill	0.054	3.25	0.176
5	Reputation within oil & gas market with international clients and partners	0.054	3.50	0.189
6	Strong ethic and compliance standard	0.063	3.00	0.189
No	Internal Strategic Factors – Weakness	Weight	Rating	Total Score
1	Not highly recognize execution and delivery system	0.072	1.75	0.126
2	Lack of experience and inability to demonstrate capability to deliver full cycle of project development	0.099	1.75	0.173
3	Limited experience working in international market	0.099	1.00	0.099
4	Inability to retain highly capable and skillful resources and develop resources with regards to succession planning	0.063	1.75	0.110
5	Unrecognized among client specifically operated in international market outside Indonesia	0.063	1.50	0.095
Total Score				2.543

Table 3 External Factor Evaluation (EFE) Matrix

No	External Strategic Factors – Opportunities	Weight	Rating	Score
1	Leverage experience with international clients & partners to enter international markets	0.162	3.75	0.608
2	International growing market seeking more competitive option with present low price of commodity market	0.153	3.00	0.459
3	Availability of abundance Indonesian engineering resources	0.081	2.25	0.182
4	Local partnership to enhance adaptation and networking process	0.126	2.25	0.284
No	External Strategic Factors – Threat	Weight	Rating	Total Score
1	Direct competition from fellow Asian consulting firm (India, Malaysia, Singapore, Philippines) with strong engineering capability and lower cost	0.162	4.00	0.649
2	International market perception of Indonesia's poor engineering capability	0.081	3.00	0.243
3	Resistance from local stakeholders and competition from existing market player	0.135	2.75	0.372
4	Bilateral relation between countries	0.099	2.50	0.248
Total Score				3.045

Strategic implications of each matrix are different; therefore IE matrix is developed to formulate alternative strategies. This matrix positioned company into a matrix of nine quadrants that divided into three major regions that have different strategy implications namely *grow and build*, *hold and maintain*, *harvest or digest* (David 2009).

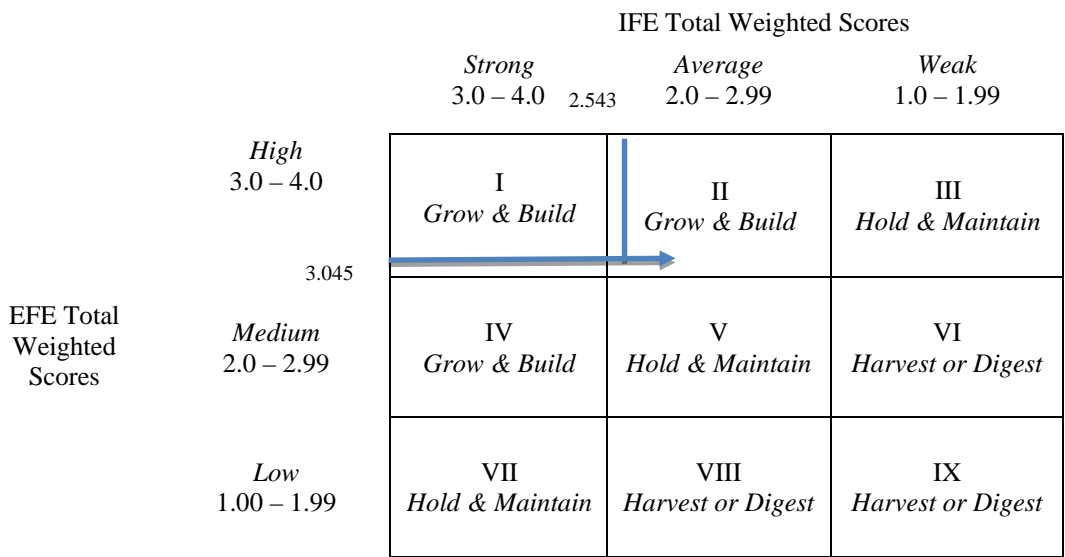


Figure 1 Internal External (IE) Matrix

Figure 1 show combination of EFE total weighted score (3.045) and IFE total weighted score (2.543) positioned PT XYZ in quadrant II which means present condition can be managed best with *grow and build* strategies whereas the commonly employed strategies for these types are forward and backward integration, horizontal integration, market development, market penetration and product development (David 2009).

This means company internal position is in average level where major strength needs to be increased to overcome weakness. While external position in high level shows that company has provided a strong response in exploiting existing opportunities and managing upcoming threat.

Strategic Planning

Internal and external environmental analysis thoroughly done to acquired complete definitions and understanding of company and market condition. SWOT analysis provides identification of multiple factors systematically to formulate company strategy which is based on logic to maximize strength and opportunity and at the same time minimize weakness and threat.

David (2009) described SWOT matrix as an important matching tool provides help to managers in developing four type of strategy which is SO (Strength – Opportunities), WO (Weakness – Opportunities), ST (Strength – Threat) and WT (Weakness – Threat).

SO (Strength – Opportunities) strategy leverages company internal strengths to harvest available external opportunities. When confronted with major threat, company will strive as much as possible to avoid and focus on the existing opportunities. WO (Weakness – Opportunities) strategy aim to improve internal weakness by taking advantage of external opportunities and ST (Strength – Threat) strategy optimized company strength to avoid or reduce impact of external threat, while WT (Weakness – Threat) strategy is a defensive tactic to overcome internal weakness and avoid external threat.

Wheelen and Hunger (2004) argue that SWOT analysis should not only result in the identification of corporation’s distinctive competencies but also in the identification of opportunities that the firm is not currently able to take advantage due to a lack of appropriate resources.

SWOT analysis performed internally and externally. First step completed by author to internal respondent and second time by author and collaborators to obtain detail information internally synergized with an objective external viewpoint to avoid any kind of subjectivism of final results (Ischenko 2011).

	Strength (S)	Weakness (W)
Opportunities (O)	<p>SO Strategy</p> <p>Enter developing international markets of Papua New Guinea and Houston where regular clients operating by exporting strategy or establishing cooperation with local and international partners by strategic alliance or joint venture strategy and maximize utilization of Indonesia engineering experts to reduce production cost</p>	<p>WO Strategy</p> <p>Enter international markets of Papua New Guinea and Houston by developing new man power recruitment and human resources development program by conducting training and benchmarking activities with international clients and partners to improve project planning and execution knowledge</p>

Threats (T)	ST Strategy	WT Strategy
	Enter international markets of Papua New Guinea and Houston by establishing a better and regular communication to improve relationships with local stakeholder and government as well as government of Indonesia representatives in overseas country (embassy, consulate, etc.)	Enter international market of Papua New Guinea and Houston by enhancing marketing and branding activities as well as the possibility of cooperating with other services provider who is looking to penetrate the markets

Figure 2 SWOT Matrix

Figure 2 describe four alternative strategies obtained from SWOT approach, namely:

SO Strategy

PT XYZ strength in basic engineering skill and competitive price structure becomes the major strength. Combined with international standard experience and excellent communication skills to tap into emerging international markets and seek an alternative of a more competitive service provider. In addition, availability of abundance Indonesian engineering experts is one of opportunities that can be optimized to form the service value in a competitive manner.

ST Strategy

Experience working with international clients and partners is not necessarily enough to penetrate the international market. Strict competition from both existing market players and other challengers who also want to enter new markets can not only be faced with technical capabilities. Good relationships with local stakeholders, especially local government and Indonesian government representatives in international markets are one of the key to entering new markets. Good adaptation and networking processes in the marketplace will make it easier for companies to embrace new markets

WO Strategy

Human resources are an important factor in business continuity and success. Similarly in engineering consultants services which focus on providing advisory services by individuals experts within it. To ensure the availability of qualified human resources, a new recruitment program is required and at the same time conducting a regeneration program within the company. In addition regular training and benchmarking to partners or clients will help to increase the competence of experts to have value and capabilities that can be offered to the international market.

WT Strategy

The organizational structure of clients separately operating between countries positioned PT XYZ only recognized by international clients operating domestically in Indonesia. This needs to be addressed by building network activities and building a well-structured and well-planned communication business to raise awareness of PT XYZ present in the market in order to enter the international market. In addition, the possibility to cooperate with other companies that want to penetrate the market will increase the possibility to share the risk and at the same time lower the level of competition.

In addition to various analytical methods used to identify factors that influence corporate strategy and obtain alternative of strategies, quantitative strategic planning matrix (QSPM) method is used to objectively determine the priority strategy.

This technique is one of strategic tools in the final stage of strategic planning that uses input analysis from the first stage which is the IFE matrix and the EFE matrix and the matching result of the second stage analysis which is the SWOT matrix, and then used in preparing a strategy priority based on good intuitive judgment. QSPM method determines total attractiveness score which will determine the priority strategy.

Alternative Strategies	Weight	S-O		S-T		W-O		W-T	
		AS	TAS	AS	TAS	AS	TAS	AS	TAS
Strength (S)									
S1	0.243	4	0.973	1	0.243	2	0.486	3	0.730
S2	0.108	4	0.432	1	0.108	3	0.324	2	0.216
S3	0.081	4	0.324	2	0.162	1	0.081	3	0.243
S4	0.054	2	0.108	3	0.162	1	0.054	4	0.216
S5	0.054	2	0.108	3	0.162	1	0.054	4	0.216
S6	0.063	-	-	-	-	-	-	-	-
Weakness (W)									
W1	0.072	3	0.216	1	0.072	4	0.288	2	0.144

W2	0.099	3	0.297	1	0.099	4	0.396	2	0.198
W3	0.099	3	0.297	2	0.198	1	0.099	4	0.396
W4	0.063	3	0.189	1	0.063	4	0.252	2	0.126
W5	0.063	2	0.126	4	0.252	1	0.063	3	0.189
Opportunities (O)									
O1	0.162	4	0.649	3	0.486	2	0.324	3	0.486
O2	0.153	4	0.613	2	0.306	1	0.153	3	0.459
O3	0.081	3	0.243	1	0.081	4	0.324	2	0.162
O4	0.126	3	0.378	4	0.505	1	0.126	2	0.252
Threat (T)									
T1	0.162	3	0.486	2	0.324	1	0.162	4	0.649
T2	0.081	2	0.162	3	0.243	1	0.081	4	0.324
T3	0.135	2	0.270	4	0.541	1	0.135	3	0.405
T4	0.099	-	-	-	-	-	-	-	-
Total			5.874		4.009		3.405		5.414

Figure 3 QSPM Matrix

Figure 3 described from four alternative strategies, SO strategy is the first priority strategy with total attractiveness score 5.874. And follow sequentially by WT strategy (5.414), ST strategy (4.009) and WO strategy (3.405).

SO strategy as main priority strategy describes good cooperative relationships with clients in the domestic market will open an opportunity to re-cooperate in international markets. This international market of Papua New Guinea and Houston can be entered with several options of entry mode such as exporting by sending technical experts to target market periodically or by developing strategic alliance cooperation method with other international partners to form a shared capability that becomes a selling value to client. In addition, client demand for service providers with competitive prices coupled with high market competition posse a challenge to company to be able to formulate a competitive production cost structure. One way to achieve this is to optimize the use of local Indonesian experts who have proven capability in accordance with the international standards but with a cheaper cost compared with other foreign experts. This competitive cost structure will ensure company existence in the market and provide good profitability level.

Market Entry Mode

Data collection and analysis of Papua New Guinea and Houston show a large and growing engineering consulting market and attractive to international companies. In order to enter a particular international market it is imperative to structure a specific entry strategy that adapts the market condition. However, large and growing market share is not solely enough to be determinant of specific entry mode strategy which is appropriate to use.

Many factors have direct and indirect influence in the selection of market entry mode. Some factors identified influencing selection of entry mode to Papua New Guinea and Houston markets are:

1. Market size and growth rate

This is one of the key factors which are a key parameter in determining the decision of entering strategy. The larger the size and growth rate of the market, the more attractive it will be. Total market size of Papua New Guinea US\$ 36,400 million and Houston US\$ 4,500 million in the last five years is very big compared to Indonesian market of only US\$ 120 million.

2. Client preference

Good cooperative relationships between company and clients on previous projects become an opportunity. This is due to client confidence of company capabilities which make no hesitation inviting company to other projects in overseas markets. In this particular case, PT XYZ has a good relationship with one of international client, ExxonMobil in Indonesia, which is the main reason for the client to invite PT XYZ to Papua New Guinea and Houston market.

3. Market competition level

Big market means high level of competition. Saturated markets tend to be very difficult to penetrate. Thus, market challengers must be very highly competitive which may impact on the possibility of loss to the company. Specific for Houston market, more than 30 multinational engineering companies are in the market which is a sign of high competition level.

4. Production cost

Company level of competitiveness also depends on how the company is able to develop good delivery system and formulate a competitive production cost structure in accordance with cost, schedule, and quality standards. Average engineer salary in Indonesia (US\$ 685/month) is lower than Papua New Guinea (US\$ 1,375/month) and Houston (US\$ 7,234/month), which is an advantage for PT XYZ to offer a competitive proposal.

5. Human resources

The availability of qualified human resources is mandatory to enter the international market. Moreover, the qualified individuals should be supported with reliable system. PT XYZ possesses highly qualified human resources and with good technical capability, however limited experience in international projects is still a challenge.

6. Political Conditions

Country political condition is one of the main factors that have a major influence on economic stability and national security. Security guarantees are essential to ensure proper business activity. Houston political conditions are very stable and

conductive; this is inversely proportional to the conditions in Papua New Guinea that are still vulnerable to the threat of political turmoil and riots.

7. Ease of doing business and government support

Ease of business establishment and government regulation support of foreign direct investment and will greatly influence the decision entry mode chosen by the company. In this particular case, Houston has a better level of ease of doing business where the establishment process can be done within one day. While Papua New Guinea has a more complicated procedure and requires 40-70 days of process (World Bank 2017)

8. Company flexibility

Another important factor is the flexibility of the company in the mode of business operation, where flexibility ability to switch from a certain strategy or mode of entry to adjust to market needs. PT XYZ has strong and rich experience cooperating with numerous international companies in the domestic market. This model of cooperation can be the basis of cooperation in Papua New Guinea and Houston market.

Thorough analysis of Papua New Guinea market resulted in entry mode recommendation of exporting. This strategy will be executed by assigning engineering team in temporary basis type. Project implementation strategy divided into three phases; initial planning, implementation and completion. At the initial planning stage, project team will be assign and place in Papua New Guinea to attend kick-off meeting and collecting all necessary data. Once all data required has been obtained, project implementation process will be conducted in Indonesia. This is a possible method as client did not require consultant presence on daily basis, while information exchange and project progress report along with arise issues and problems can be communicate through email and share file media. The final phase of project completion will be undertake in Papua New Guinea, where team of engineers consist of team leader and support by engineers of each related discipline deployed in short period for final delivery of the project to client.

This exporting strategy will becomes a feasible option due to instability of political condition, threat of security and difficulties in business establishment in Papua New Guinea. In addition, even though company has an advantage on lower experts cost, establishing an office with its entire associated cost will increase total production cost which only lead to company losing its advantage and becoming uncompetitive.

Strategic alliance or joint venture mode with international partners is another recommended long-term strategy. The cooperation model will increase company capability and competitiveness and open a possibility to work on larger scale projects. However, based on expert opinion this model is feasible when PT XYZ reached early level of sustainability with two or three ongoing projects at the same time which lead company to economic of scale where total cost can be distributed into service cost proposed to clients.

Recommended entry mode strategy for Houston market is strategic alliance or joint venture scheme on long-term basis depending on project preferences and requirements. Several potential international partners identified are Chiyoda (Japan), Saipem (Italy) and SNC Lavalin (Canada) which is the parent company of Atkins. These three companies have been working together with PT XYZ in Indonesia market and have a common memorandum of understanding to develop engineering market in Indonesia.

Average engineer salary rate in Houston is quite high above PT XYZ engineers' salary. This puts company in a fairly good position of competitiveness in terms of market value. In addition, political stability and government support in ease of doing business create a good conducive business climate in Houston.

One main concern is high level of competition due to big market size and high growth rate. Saturated market coupled with aggressiveness of several multinational companies looking to penetrate Houston market.

Moreover, United States also has a fairly rigorous security selection process of individuals who will enter the country, which will be one of the obstacles in establishing business in Houston.

IV. CONCLUSION

Papua New Guinea and Houston market proved to be a potential international market to enter. PT XYZ sound engineering construction and project management capability is found as major strength of the company while good relation with international clients and partners could be an prospective opportunities to leverage. Company lack of international experience and full cycle project development capabilities is main weakness that need to be properly address while threat of direct competition from Asian consulting firms must be responded cautiously

SWOT and QSPM matrix provides precise strategy alternative and priority for company to choose. Exporting in short-term is recommended entry mode to enter Papua New Guinea market, while strategic alliance or joint venture could be a possible option in long-term. Conducive market of Houston provide better guarantee and ease of investment, therefore choice of first entry mode strategy with higher risk such as strategic alliance or joint venture is still a feasible mode to execute.

Further research on financial and taxes treatment and risk of Papua New Guinea and Houston market and analysis of financial capability of PT XYZ to develop project profiling base on value is needed to obtain a more highly precise analysis and appropriate selection of entry mode.

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