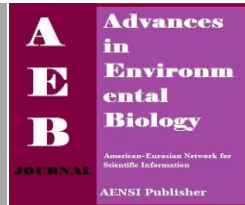




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## Identifying and Prioritizing Key Success Factor and Strategic Capabilities for Gaining Sustainable Competitive Advantage in Upstream Oil Sector of Pacific Ocean

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### ABSTRACT

Future effect of Oil Price on Upstream Oil Production Profitability is evident. Higher prices for oil will lead to more investment in development of oil reserves, both by international oil companies and national oil companies.. And lower prices might lead to delay in exploration projects .So rate of performance is dependent on oil prices. According to IEA, upstream investment budget for 2009 was around 388 billion or 19 percent lower than 2008 and it was because of fall in oil prices and consequently many opec members delayed the completion of 35 0out of 150 planed upstream projects. But in 2011 and 2012 it has been changed .Global economic growth was 3.0 percent in 2011and 2012 and as the global economy recovers the market expects that world oil demand will increase. According to IEA (2010), world oil demand grew by 1.7 mb from 84.9 in 2009 to 86.6 in 2010 and more than 80 percent of oil demand growth is in Asia and middle east and Latin America and due to this factor in April 2010 crude oil was trading more than 80 Dolores per barrel more than 2008.

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## INTRODUCTION

Global economic growth was 3.0 percent in 2011and 2012 and as the global economy recovers the market expects that world oil demand will increase. According to IEA world oil demand grew by 1.7 mb from 84.9 in 2009 to 86.6 in 2010 and more than 80 percent of oil demand growth is in Asia and Middle East and Latin America and due to this factor in April 2010 crude oil was trading more than 80 Dolores per barrel more than 2008. Upstream oil sector including exploration, development and production is one of the most profitable parts of the oil industry value chain. The production sector has located the greatest amount of margin to itself compared to other parts of oil industry value chain with 41% of net profit margin (table 1).

**Table 1:** Profitability of oil sector.

Operation	Costs	Value	Gross Margin	Net Margin	Percent
Exploration	2.97	16.33	16.33	13.36	36%
<b>Production</b>	<b>17.78</b>	<b>49.00</b>	<b>32.67</b>	<b>14.89</b>	<b>41%</b>
Transportation	1.00	51.96	2.96	1.96	5%
Refining	3.70	60.46	8.50	4.80	13%
Distribution	1.90	63.69	3.23	1.33	4%
Marketing	0.80	64.85	1.16	0.36	1%
Pump Taxes	19.15	84.00	0.00	0.00	0%
				<b>36.70</b>	<b>100%</b>

### Background to the Problem:

However, small and medium sized development and production providers in Pacific Ocean have faced threatening industrial economic features and competitive forces leading to intensity of competition and making

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their profitability shrinking [2]. These threatening factors are related to maturity of the industry and intensity of competition. Because of being in the stage of transition to maturity of industry and facing an intense competition, Malaysia and other pacific members have faced the shrinking growth leading to reduction in their profitability. The intensity of the competition as a threatening factor is due to vertical integrations and diversifications done by oil industry companies [14]. Over the last few years, because of economic crises, many downstream and middle stream oil companies such as refining companies have faced trouble because of lower demand for their products, so they are trying to enter upstream sector of value chain. Besides, many companies are vertically integrated and have control over every level in the chain. The recent trend in the industry shows that companies merge to expand their upstream levels instead of downstream levels. These all have increased the intensity of competition for development & production providers [14].

The maturity of the industry is also a threatening factor. The oil production in pacific ocean including China, Indonesia, India, Australia and Malaysia, which totally makes up 10 percent of oil production of the world, peaked between the late 1990's and early 2000's, Figure 1.2. It is expected that oil production continues its declining trend on a 2 percent rate annually in upcoming decade. Such mature and intense industry entails that firms look for strategies leading to sustainable advantage [2].

#### *Statement of Problem:*

There are two views in strategy literature on how firms can gain sustainable competitive advantage. In the first view which is called recourse based view, competitive advantage is derived from the strategic capabilities derived from the resources and the competencies the company has. But in any industry, there are Threshold Capabilities and Strategic Capabilities. The Threshold Capabilities are simply for survival reasons, while capabilities for competitive advantage would allow them to outpace their peers [20]. So, it is necessary to find what the required Strategic Capabilities are. Strategic capabilities can be identified in different way. In this research, strategic capabilities considered as distinctive competence come from the value adding activities in upstream oil industry, with which companies obtain competitive advantage. In fact the activities inside the firms should be the source of producing competitive advantage; we cannot consider capability as a process of collection of resources or consider even a capability as the source of competitive advantage. In fact, strategic capabilities come up as a result of carrying out a set of activities inside the firm in relation to its competitors. So from all the capabilities, only a few of them are considered as the source of competitive advantage. Capabilities are implied as the integration of primary value activities, support activities, and/or primary and support value activities.

In order to investigate the source of Competitive Advantage, we should understand how each competitively relevant resource and capability affects costs and uniqueness or how each adds value to the services provided. Porter's modified value-chain is useful again for breaking the organization "into its strategically relevant activities. Understanding the value-chain enables decision makers to better understand and control the primary cost drivers and differentiate their services by capitalizing on their uniqueness drivers [20]. The most important point is that linkages within the Value Chain differs in different firms and the more proficient a company can handle the relation between activities to reduce the cost, the better it can receive competitive advantage Duncan. So, it is necessary to scan the competitive advantage of successful firms in industry with its rivals in order to find out if its capability is considered as a distinctive capability or not.

There are several sources of competitive advantage with regard to market based view. Among all different perspectives, the ones offered by Grant and Thompson [20] addresses the concept of industry success factors as the source of competitive advantage. However, it should be noted that, Industry Success factors are dependent on industry situations. In fact, it can be said that, KSF are different based on the type of industry, and even within an industry, they are sector dependent. Yet, even within a sector of an industry, KSF are geography specific and vary from time to time due to changes in industry environment such as Competition level, rate of Technological Innovations, Maturity level of industry, etc. In fact because of such driving forces of change, companies should continuously monitor the market to trace changes in KSF, which is not an easy task [20]. So, it is necessary to discover what the industry success factors for upstream sector are at the time now.

The understanding about the contribution of these two points of view in developing the competitive advantage of the firms is not perfect and still urges for more research in this area [12]. According to Thompson [20], how well a company capabilities measure up against an industry success factors determines how competitively success full that firm is so, strategically thinking of the sources of competitive advantage in oil industry entails both an environmental analysis in oil industry leading to identification of the driving forces of change and success factors and internal analysis of successful firms in this industry to identify the adding value activities. In fact, in order to conduct this research and identify sources of competitive advantage the frame work offered by Thompson is followed. In addition, to find about the degree of contribution of the constructs of any of these views, an Analytical Hierarchical Process (AHP) model is used to prioritize identified factors. Thus, this research intends to examine the environment and market and structure of upstream oil production to identify the contributing variables in competitive advantage in this sector. Besides it intends to investigate the internal

strength of the successful Development and production providers in Pacific Ocean to find the strategic internal capabilities and value adding activities, with which the company can have competitive advantage.

#### *Methodology:*

The research adopted a hybrid approach. First, there was a desk research. At this point, the researcher did in depth analysis of the industry and 3 of the Companies active in this industry to identify the most important criteria (variables). Then, the research used a Survey method to receive the experts' and managers perception to prioritize the most important criterions. The survey method used in this study was the Anathycal Hirarchical Processing (AHP) method developed by Saaty [17]. Based on this approach, to identify KSF, one should directly search what perception exists in the minds of experts with respect to KSF. Through AHP, a firm can identify the sub-goals that are required to achieve the main goal. AHP is basically used for determining the success factors.

The participants in this study included two groups. On one hand, 10 experts in oil industry were chosen to answer the questionnaire. Selecting the experts was based on their accessibility. On the other hand, the second sample in this study was the successful firms in upstream oil sector of Pacific Ocean. Successful companies were investigated to find out the internal factors playing role in their success. Their Choosing was purposive. The criterion for choosing the successful firms was based on Profitability and ROI ratio of the company engaged in upstream oil sector which made it known as a successful company (ApendixA). The data used in this study is acquired from actual financial report of these 3 companies within a period of 3 year .the period which is referred in this study is within 3 years from 2009-2012.The reason to choose this period was the accessibility of data within theses 3 years.

The Pair wise Comparison Matrices is used as the instrument in this research. Once the hierarchical structure has been formed, the judgmental process by experts begins across all elements. For each level of the hierarchy, beginning at the top and working down, a comparison matrix for the components is obtained. However, the input matrix of pair wise comparisons shows the extent to which one element is preferred over another by experts in determining the criterion, sub-criterion and specific sub-criterion across all levels shown in the hierarchy within each of the three companies. This study used the standard measurement scale developed by Saaty [17]. The scale ranges from equal to extreme where One represents equal importance and Nine indicates absolute importance. The scale is 1, 3, 5, 7, and 9 with 2, 4, 6, and 8 as intermediate values. Figure-2 shows Saaty's standard scale which respondents use in AHP.

**Table 1(1):** AHP pair wise comparison scale for 9 importances.

Intensity of importance	Definition
9	Absolute importance
7	Very strong or demonstrated importance
5	Strong importance
3	Weak importance
1	Equal importance between the elements

#### *Literature Review:*

Reviewing the literature and Construction of Model Hierarchy is done by reviewing is started by going through institutional publications related to oil industry in a Driving Force of Change oriented review. The data from institutional publications included the IEA report (2010), Canadian Assessment of Energy (2010), Boston group analysis of oil production profitability and Bank Negara report on economic condition of Malaysia. Then the profile of three of the oil companies active in upstream sector in Malaysia, India and China are investigated (Sapura Crest, Cairn India, CNOOC). 3 company's profile and annual reports within 3 years in a Value Chain oriented view are investigated. This basic hierarchy can aid in identifying criteria, sub criteria and specific sub-criteria. However, this hierarchy is based on two major levels: at level one, the main goal or category is called competitive advantage. At level 2, the subcategories include the Industry success factors and strategic capabilities.

Strategic management literature reviewd includes Contemporarily Strategy Analysis 7th edition written by Grant and Crafting and Executing Strategy, seventeenth edition written by Thomson, Strickland and Gamble.

#### *Emergence of National oil Companies:*

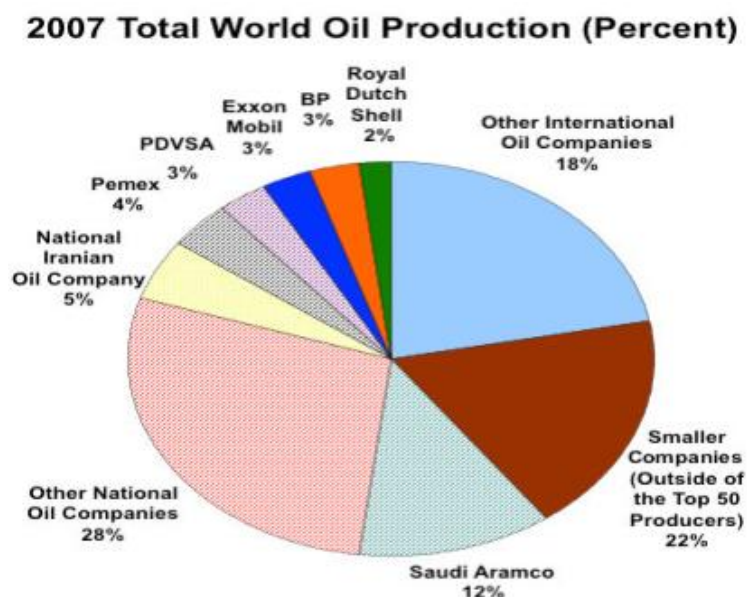
Threat of potential entrants to the market is an important determinant of profitability. And intensity of this force is determined by two variables which are economy of scale and advantage of cost. New entrants are in a risky condition. They encounter with two alternatives and doing any of them may lead to some sort of disadvantage. On one side they can enter the market on a small scale and consequently they have to bear high unit costs, which might reduce their profitability. Because In industries that are capital intensive, efficiency requires large-scale operation. According to Boston Consulting Group [3], profitability in upstream oil production is a function of workload and productivity and factor cost. Work load means the rate of performance

or the number of operations and is a key factor influencing on profitability. on the other choice they can enter on a large scale and accepting the risk of unused capacity .Although entering on a large scale reduces the proportion of the fixed cost to variable cost and may lead to fall in per unit of output and creating sales volume and it is likely to increase profit margin but in oil industry, it is associated with risk. Because considering the maturity of production, it is possible that exploration efforts for oil do not end up with optimal results. Because most remained reserves are small reserves. While the required capital for setting up a production facility which is a factor cost is very high.

Apart from economies of scale, established firms may benefit from a factor which is called cost advantage against new entrants because they entered earlier to they have access to cheaper supply cost advantages often result from the acquisition of low-cost sources of raw materials. Here it is good to make a distinction between downstream and upstream sector. In downstream oil production, the new forms of supply management and emergence of clusters can make a strong barrier against the entrance of new comers because firms already established their own network of supply chain. while in upstream sector it does not make sense because distribution channels are not a key factor for international companies and supplies can be provided on an international scale in fact supplies are considered as commodities that could be available in different forms so it can be concluded that threat of new entrant relating to factor of cost advantage is low in upstream Sector. Although there is an exception, and is the matter of threat of emergence of national oil companies which are supported and backed up by local governments and it is expected that their threat even rises. Since the world reserves production is on a declining trend, Governments would like to be more dominant on these reserves. That's why they are interested to developing national oil companies which are dependent to them.

#### *Political Relation with Governments:*

The suppliers in upstream sector are the owners of the natural resource reserves that provide the chance to production companies to performance According to ENI, the top ten oil reserve holders hold 84.5% of all known oil reserves, which accounts for high power of suppliers. Besides another factor which makes their power more is the possibility of forward integration. In fact, the reserve holding countries have been dramatically exploiting their reserves through their own dependent national companies as seen in the Middle East [13]. Thus it can be implied that the bargaining power of the supplier is high towards the IOC. So international oil companies are trying to develop political relationship with owners of reserves.



#### *Volatility of Oil Price and its Effect on Production Cost:*

Oil price fluctuations have made a volatile business environment. As evidenced in figure (2.3), oil price has shown rise and fall in 2010. This volatility can be a function of structural factors and market events including Asian demand growth and emergence of NOC and rising marginal cost of oil production. These factors are considered as traditional factors which have been affecting on demand and supply of oil production [4].

There is a positive correlation between Marginal Cost of oil production and rising oil price. It is argued that this marginal cost is related to increase in costs for steel pipes, drilling rigs labor and other input costs or inbound logistics which are related to production and they are influenced by the price of oil. According to EIA between 2005 to 2010 the average worldwide cost of barrel of oil production increased by 50 percent and in

future also it is expected that the marginal cost of oil production would continue to rise, it is associated to the fact that the world is facing a declining production life cycle so it requires moving into more expensive and challenging oil reserves to meet the demand growth of energy.

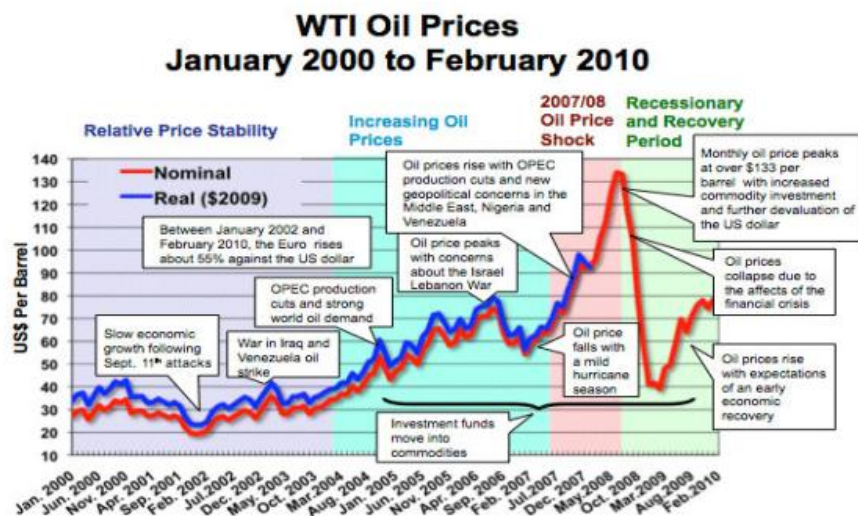
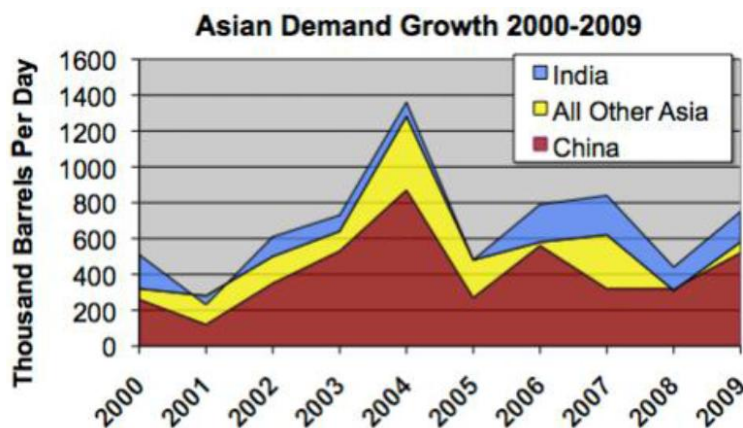


Fig. 2(3): Volatility of oil price (IEA 2010).

#### Changes in Asian Demand and its Effect on Growth:

Demand Growth or increase in demand for oil especially in Asian developing countries is one of the factors which makes a significant contribution in profitability of oil production companies [4]. The sharp rise in demand for oil from China and other Asian developing countries was the main factor and a great deal of growth in demand is related to this factor. It is argued that the oil market has turned into a demand driven market in which suppliers' capability to respond to changes in demand has decreased, so supply is not the dominant factor. Instead, demand is the factor that can play a vital role. In fact increasing and decreasing the amount of supply in the market by OPEC does not have the leading role, instead the rise and fall in demand plays the vital role in pricing.



#### Reviewing the Profiles of Successful Companies in a Value Chain Oriented View:

The questions stated in Thomson, Strickland and Gamble [20] are addressed to identify the value adding activities (distinctive capabilities) of these 3 companies of the firm. These principals of crafting are considered while reviewing the secondary data from company's profile. We should make a distinction between 'Threshold Resources/Competencies', which are necessary for the organization to survive and 'Unique Resources/Competencies', which can give a competitive advantage to the organization in comparison to rivals. This section defines the resources and the competencies that lead to Strategic Capabilities for oil companies in general.

#### Tangible Financial Resources as Commodity but Operational Efficiency Strategic Capability:

Financial resources and physical assets which are mentioned in firm's financial statements are tangible

resources. But after identifying the resources which have the potential to adding the value, a company should identify how to elicit added value from that potential recourse. In fact a company should look for the best ways to optimize the efficiency of that recourse. For oil and gas companies, having access to oil reserves is not the only optimal condition, besides a company requires access to the financial resources to expand its operation, because scale of operation is a key factor. Without the financial recourses or financial capability, it is not profitable to extract the oil efficiently.

Oil exploration is a risky and capital intensive activity. This fact makes the process of borrowing money difficult because financial institutes don't trust easily to give debt at reasonable interest rates. Although over the last decade a lot of financial institutes started to invest in oil production industry, but with the violate condition resulting from fluctuations of oil price, depending on debt is not very trustful. As a result, oil companies should focus on increasing their profit and reinvesting their profits to the business. Besides they have the choice of raising equity capital by financing the projects. In fact operational leverage is preferred to financial leverage. An oil company with limited financial resources or lack of the capability for raising the financial resources is not able to present an efficient scale of performance in E&P operations.

Operational Efficiency can be referred to differently in different parts of the value chain. in upstream operations, it is the matter of exploration & production costs. Exploring, developing and exploiting the reserves at the lowest possible cost is considered as a means of gaining operational efficiency in upstream sector. Since the companies in upstream sector cannot make great fluctuations in the ultimate price of crude oil, their control on operating cost is considered as means of increasing upstream profits. According to Boston Consulting Group, one of the main factors with which upstream stream companies can increase their profitability is reducing costs. Cost is a function of workload, productivity and factor costs. So it is unique competency while crude oil prices are high.

#### *Deep Water Drilling Technology:*

There is a distinction between oil industry's being technically complicated and its being technology oriented. Because of high spread of technological advances, technological properties can be easily acquired and provided by international oil companies so technology cannot be considered as the absolute source of competitive advantage, because it is not exclusively owned by a special company and all firms can easily outsource. So it has turned in to a commodity. In fact companies don't possess monopoly power over this recourse any more. So the potential to eliciting competitive advantage from this recourse has declined. Although we should not ignore the importance of being technologically advanced. In fact, doing large scale production operations is dependent on the ability of an oil production firm to be able to perform in deep waters and such operations requires advanced technological assets such as deep water drilling technology.

#### *Intangible Resources of Managerial and Technical Skill (know how to do):*

Intangible resources can bring competitive advantage for a firm. Considering the criteria of mobility of resources which gives importance to resources, intangible resources possess a relatively high value, because this resource is considered as a group which is based on team of resources or organizational capabilities, it is less mobile compared to individual resources, so it has a relatively high importance because it is difficult for competitors to replicate. Culture in an organisation can be the source of complete advantage. Cultures is a means with which the individual skills of a firm can be integrated. Based on how complex an organisation integrate these individual skills, can have better advantage.

Based on porters value chain the Sapura's activities are divided to primary activity and secondary activities. Installation of Pipelines & facilities, IPF, as the Primary activity of the company are considered as an strength for the company. It has had in hand order book of about RM8.5 billion locally and abroad. Although they are facing high operating expences. Sapura is also considered as the Leader in offshore oil and gas drilling business in Malaysia and it is mostly because of technological assets it acquired through joint ventures. For example, T10 is acquired as a result of joint ventures and strategic alliance with Seadrill,

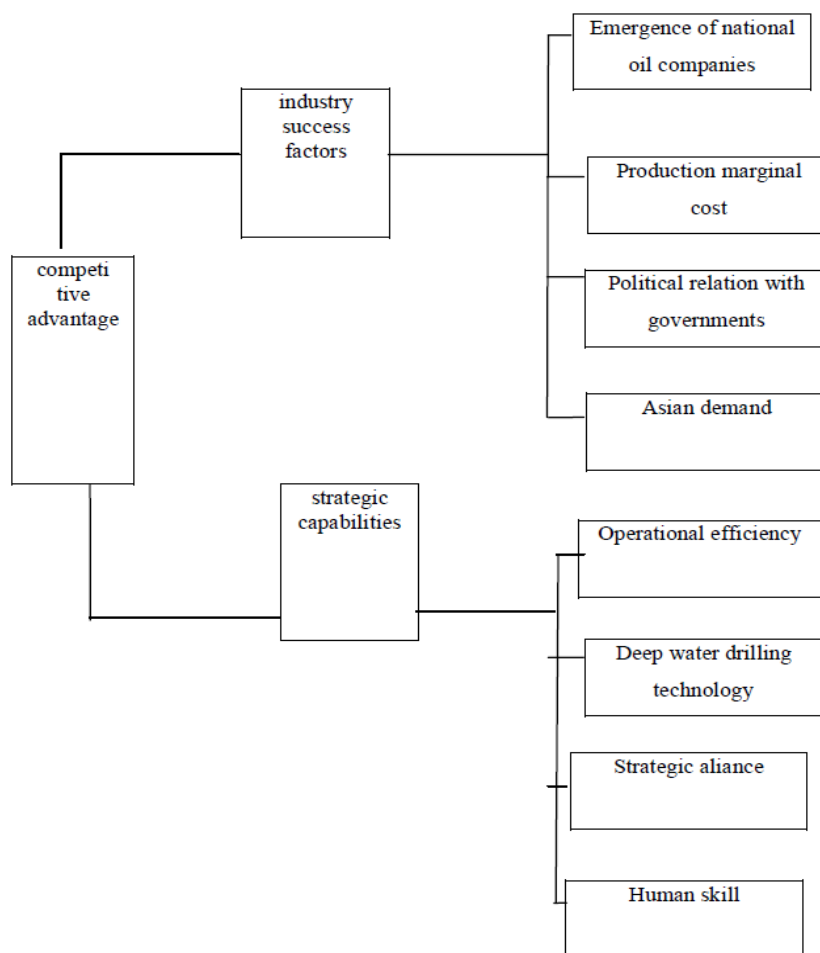
Support activities that are done by Sapura crest include development of technological assets and human resource management activities. Through Joint venture and alliances with partners on R&D throughout the world, especially in Asia, it acquired a lot of Technological capabilities and is turning into leading provider of technologically superior and high quality services. Sapura crest possesses highly skilled and experienced team consisting of 609 technical staff, 729 non-technical staff and about 1,500 offshore personnel which indicate its strength in possessing technical and efficient workforce.

#### *Strategic Alliances and Joint Ventures:*

Based on the Strategic implication to identify strength leading to competitive advantage deriving from competitive advantage Matrix, in Appendix B, Global Strategic Alliances and Joint Ventures in these 3 companies are implied as the capability which they have acquired both technological assets and skill to do more value adding activities. Their strategic alliances Provide the companies with technology capabilities,

competencies and attractive geographic markets. Joint-ventures for vessels, deep sea capable remote operated vehicles and other capabilities that enrich these companies as a leader in the provision of oil and gas services in the region.

For example; Sapura Crest entered into a Joint-Venture Agreement with Larsen & Toubro Ltd (L&T) of India in 2007 to build a new vessel to undertake shallow water installation services in meeting the growing needs of the Indian and Middle Eastern oil and gas industry. When this new vessel was commissioned in 2009, it complemented the operations of Sapura 3000. The strategic alliances with some of the biggest names in the global oil and gas business such as Seadrill, Acergy, Larsen and Toubro (L&T) and Quippo are other examples of the company's strategy on strategic alliances. On November 30, 2010, in a Joint venture with Acergy, SAPURA received a \$160 million offshore contract from PTTEP Australasia (Ashmore Cartier) to provide offshore transportation and construction services for the Montara Development project in the southern Timor Sea. In case of human skill the continued success of Sapura Crest depends, to a significant extent, upon the abilities and continued efforts of its existing management. The loss of any key personnel of Sapura Crest may be detrimental and have an adverse effect on the operations as well as financial performance of Sapura Crest. Sapura Crest provides training programmes that are conducted on-the-job, internally or by external trainers. Besides Sapura crest has achieved the broad functional capabilities in Operation Management and project management Capability. Operational Efficiency and Contentious Improvement in Operation is evident. Their success and Efficiency in Gaining Volume, supports this claim.



**Fig. 3(1):** Hierarchical structure of competitive advantage.

*Model of Hierarchy of Competitive Advantage:*

Construction of Model Hierarchy is done after having reviewed the literature and identifying the key success factor and strategic capabilities. This basic hierarchy can aid in identifying criteria, sub criteria and specific sub-criteria. However, this hierarchy is based on two major levels: at level one, the main goal or category is called competitive advantage. At level 2, the subcategories include the Industry success factors and strategic capabilities.

*Method of Analysis:*

In this study, the evaluation model used was that suggested by Saaty. The following formula developed by Saaty (1995, 1980) has been applied for this pairwise comparison:

$$AW = \lambda_{\max} W \quad (1)$$

Where  $A$  is the pairwise comparisons matrix,  $W$  is the normalized weight vector and  $\lambda_{\max}$  (lambda max) is the maximum eigenvalue of matrix  $A$ . The software used in this analysis is called Expert Choice software.

In each pair wise comparison, the consistency of judgments should be assessed using consistency ratio (CR) or inconsistency index. Noteworthy, these two are used interchangeably in the literature; however, in this study, the researcher preferred the term consistency ratio. It shows how serious are the violations of consistency and to what extent the judgements are trustable. Therefore, the CR is measured using equation 2, and the value should be around 0.1 or less to be acceptable [17].

$$CR = \frac{CI}{RI} \quad (2)$$

In which,  $CI$  is the consistency index of pairwise comparison matrix and can be measured using the largest eigenvector ( $\lambda_{\max}$ ) and the size of matrix ( $n$ ) (Equation 3).

$$CI = \frac{\lambda_{\max} - n}{n - 1} \quad (3)$$

$RI$  which represents the random consistency index is extracted from table 2. This means that the consistency index is comparing to the condition that we have taken the numerical judgment at random from a reciprocal matrix.

**Table 3(2):** Random consistency based on the size of matrix.

Size of Matrix	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Random consistency	0	0	.58	.90	1.12	1.24	1.32	1.41	1.45	1.49	1.51	1.48	1.56	1.57	1.59

*Result:**Comparison Matrix of Strategic Capability against Industry Factor:*

As can be seen, the relative importance of the subcategory of strategic capability (0.667) is more than that of the industry factors (0.333). Besides, the consistency reliability is  $CR = 0.00$ .

**Table 4(1):** Comparison matrix of level 2 subcategories .

Competitive advantage factors	industry	strategic capabilities	Relative importance weight
Industry factors	1	1/2	0.333
Strategic capabilities	2	1	0.667

**Table 4(2):** Comparison matrix of industry subcategories.

Industry factors	Asian demand growth	Emergence of national oil companies	Marginal cost of oil prod	Political relations	Relative importance, weight
Asian demand growth	1	2	2	5	0.439
Emergence of national oil companies	1/2	1	2	4	0.294
Marginal cost of oil production	1/2	1/2	1	3	0.074
Political relations	1/5	1/4	1/3	1	0.192

$CR = 0.02$

*Comparison matrix of Subcategories of Industry Factors:*

Among the four sub categories of industry factors, the relative importance of the specific sub category of the Asian Demand is the mostly ranked criteria with 0.439. the second most important ranked criteria is emergence of national oil companies with relative value of 0.294. The Political relation and marginal cost of oil production are the last two ranked criterians with 0.192 and 0.074 respectively. Considering the Consistency Ratio of 0.02 which is less than 0.1 the answers are reliable.

*Comparison Matrix of Subcategory of Strategic Capability:*

The analysis shows that the sub category of strategic alliance was the highest ranked criteria among 10 participants with 0.340. After that, the operational efficiency with relative importance of 0.287 was the second



highly ranked factor. The deep water drilling capability with the value of 0.237 was the third important known factor. Finally the human skill was considered as the least important factor with importance of 0.136. Since the Consistency ratio is 0.07, the responses are reliable. It should be noted that the reliability is CR= 0.07.

**Table 4(3):** Matrices of strategic subcategory.

Strategic capability	Stratratagic alliance	Operational efficiency	Human skill	Deepwater drilling technology	Relative importance
Strategic alliance	1	2	2	1	0.340
Operational efficiency	1/2	1	2	2	0.287
Human skill	1/2	1/2	1	1/2	0.136
Deepwater technology	1/2	1/2	2	1	0.237

*Final Weights Assigned to Industry and Strategic Capability in the Evaluation Phase:*

This table below reports total average of priorities of 1 main criterion, 2 sub-criteria and 8 specific sub-criteria. Across respondents, there was general agreement that Strategic alliance is the most important criterion leading to competitive advantage for the company in upstream oil sector. It was generally accepted that operational efficiency and deep water drilling capability are the second and third important ranked factors. It is notable that from the four sub categories of industry factors the growth in Asian demand and emergence of national oil companies were known as the highest ranked industrial criterions. However, their importance was known to be less than the variables of strategic capability, except the sub category of human skill which was less than those of Demand and national oil companies.

**Table 4(4):** Matrices of final weight.

Sub Criterion	industry factors				strategic capabilities			
	Asian demand	Political relation	National oil companies	Marginal cost	Deep water Drilling technology	human	operational efficiency	Strategic alliance
Criterion weight	0.333				0.667			
Sub Criterion weight	0.439	0.192	0.294	0.074	0.237	0.136	0.287	0.340
Total Weight	0.146	0.064	0.098	0.025	0.158	0.091	0.191	0.227

The researcher tried to analytically present the findings. The overall conclusion in comparing the two sub categories has revealed that, although there was general consensus across respondents' responses that subcategory of capability is more important than sub category of industry factor (Table -1), the difference between the relative importance of two group was not significant.

*Discussion:*

Managerial and Technical Skill was revealed as strategic capability. According to Peteraf human and organizational assets such as skill or Know How To Do are given priority compared to physical assets. According to studies that were done by Kumar, It is approved that there is a positive correlation between the managerial and technical skill of and financial performance of the company. Deep water drilling technologies is considered a unique competency. As it was clear in analysis of case studies the companies acquired most of its deep water drilling technology through joint ventures. Either by a joint agreement to construct the technological asset or through employing the technological asset which is owned by its partner. At the moment, deep water drilling is regarded as a unique competency which can result in a competitive advantage. Strategic Alliances can be considered as capabilities for changing the Game in Future. Strategic Alliances can provide the firms with resources such as specific skills and financial resources [7]. Other Researchers such as Weiwel and Hunter [23], Hagedoorn and Baum and Oliver [2], believe that strategic alliance can bring market power that can result in enhancing the competitive advantage or strategic position. In Our case study, it was revealed that the three companies were taking advantage of the Strategic Alliances in both ways. Technological resources that are gained by these oil Development & production companies through alliances enabled them to reduce the operating cost and increase their profitability. And on the other hand, these resources led them to accept more projects and win more awards and improve its book of order which lead to increasing their profitability.

*Conclusion and Recommendation:*

At time now, many international firms are facing very competitive and difficult market position. Vulnerable strategic positions happen when firms are in difficult intense competitive market situations. These days' international companies and especially oil production are stuck in very demanding competitive races. Because the competition on increasing their presence in national markets regarding the increasing dominance of government related companies has made the competition intense. Besides if firms are meaning to compete in

future they should provide themselves with value adding differentiated business capabilities that can lead to capturing more opportunities in order to bring them competitive advantage. So, firms in highly competitive markets such as oil industry have vulnerable strategic positions because margins are low and product differentiation is difficult. In such situations, alliances can be considered as a supplementary reliable strategy to enhance the firm's competitive strategies [20].

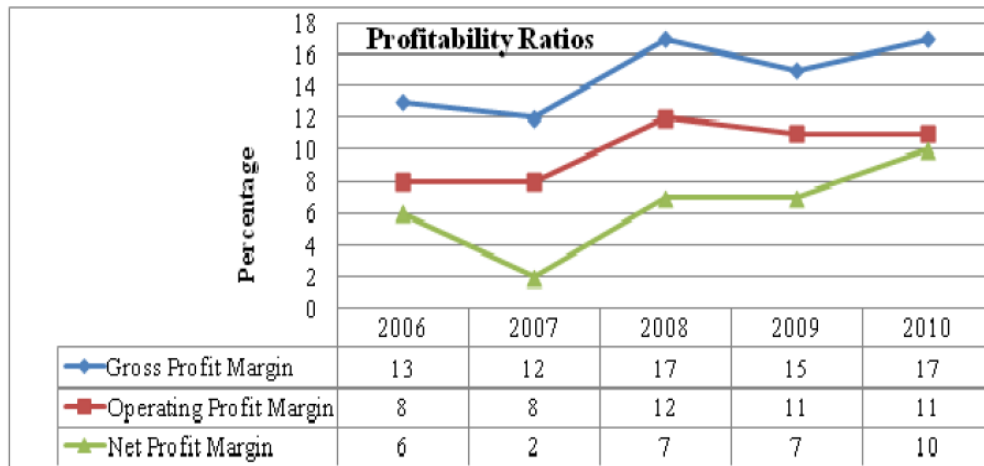
Evaluation of variables in this study was done on the assumption that price is increasing. In fact all the strategic capabilities were identified to be unique as long as the price is high. Considering the researcher discussion on volatility of oil price, it is good to consider the role of price as a fuzzy variable. In fact, it is valuable to see the contribution of the identified factors under different price circumstances.

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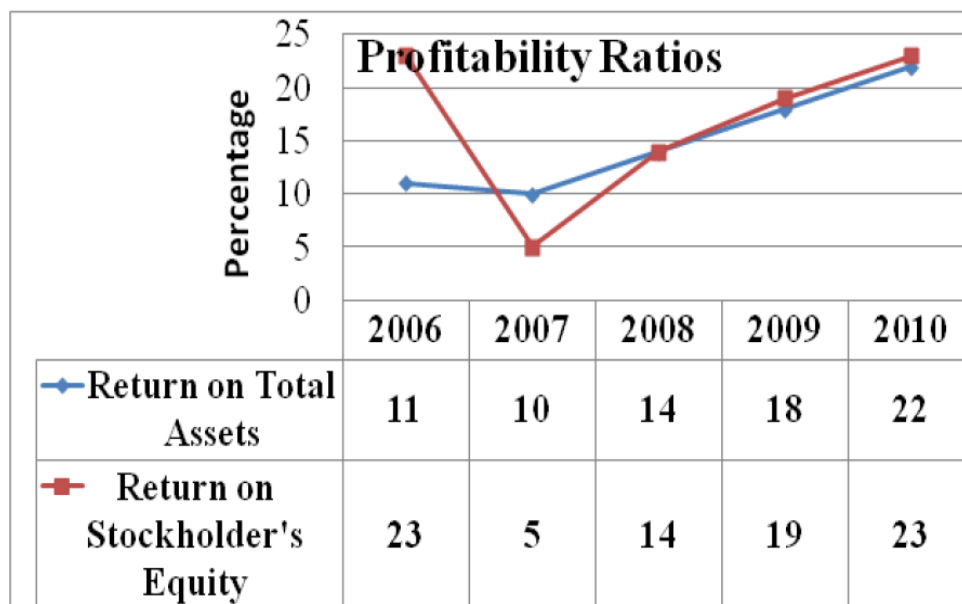
Appendix A

Profitability Ratio of Sapura Crest Within Five Years



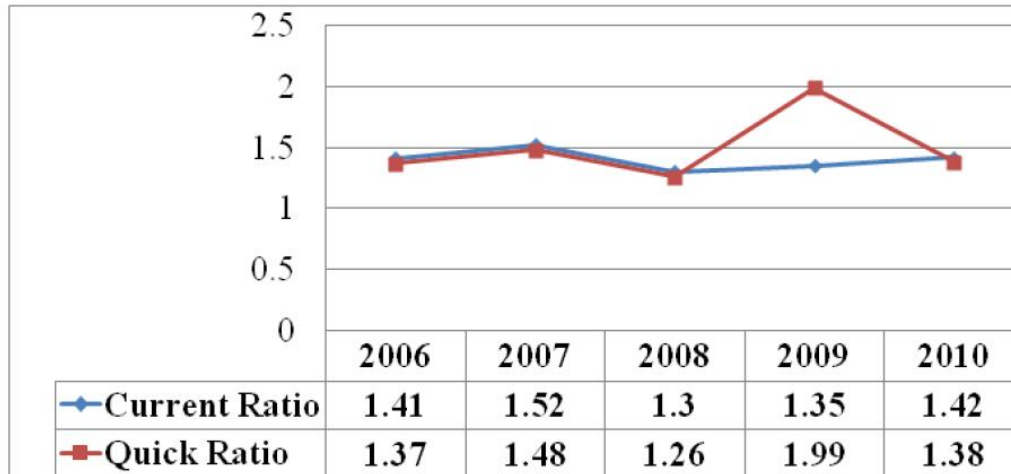
Appendix B

Profitability Ratio of Sapura Crest With in Five Years



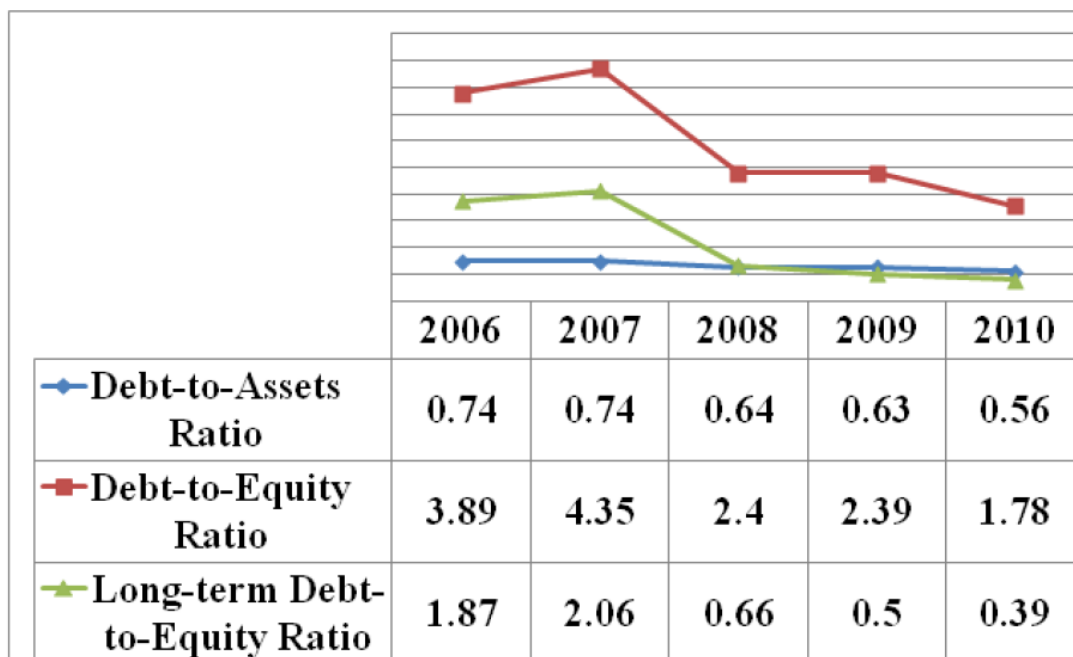
## Appendix C

## Liquidity Ratios



## Appendix D

## Leverage Ratios



## Appendix E

### Expert survey

Survey No

Date

Name

Last name

The position in company

Indicate your significance from the pair comparison of the criterions toward each other

critierian	Strategic aliance	Political relation	Emerge national oil companies	Operational eficiency	Human skill	Project managment	Deep water driling
Strategic aliance	1						
Political relation	*	1					
Emerge national oil companies	*	*	1				
Operational eficiency	*	*	*	1			
Human skill	*	*	*	*	1		
Project managment	*	*	*	*	*	1	
Deep water driling	*	*	*	*	*	*	1

Appendix F&G

**Identifying Strength and weakness (Assist Matrix)**

Regrouping Into resources, competencies & capabilities		Power of the Strength or weaknesses			
		Value	Rareness	Imitability	Sustainability
<b>Strengths</b>	<b>Resources</b>				
S1 →	S1 Growing revenues	Competitive	Distinctive	Potential	Potential
S2 →	S2 Strong operating margin	Distinctive	Competitive	Distinctive	Distinctive
S3 →	S3 Strong order backlog	Competitive	Potential	Potential	Potential
S4 →	S4 Efficient use of resources	Distinctive	Competitive	Competitive	Distinctive
S5	W1 Limited Liquidity Position	Uncompetitive	Uncompetitive	Uncompetitive	Uncompetitive
S6	W2 Low Return on Equity	Unattractive	Unattractive	Unattractive	Unattractive
S7					
<b>Weaknesses</b>	<b>Capabilities</b>				
W1	S5 Strategic Alliance	Competitive	Competitive	Competitive	Competitive
W2	S6 Widespread Operations	Competitive	Competitive	Competitive	Competitive
W3 →	S7 Wide service portfolio	Competitive	Competitive	Competitive	Competitive
W4 →	W3 Narrow Customer Base	Uncompetitive	Uncompetitive	Uncompetitive	Inadequate
W5 →	Dependence upon Domestic Market	Unattractive	Unattractive	Unattractive	Uncompetitive
	Declining Market Share in Sector	Uncompetitive	Uncompetitive	Uncompetitive	Uncompetitive